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# PSYCHOLOGICAL ABSTRACTS

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## CONTENTS

General.....	1785-1816
Sensation and Perception.....	1817-1848
Feeling and Emotion.....	1849-1851
Attention, Memory and Thought.....	1852-1864
Nervous System.....	1865-1891
Motor Phenomena and Action.....	1892-1929
Plant and Animal Behavior.....	1930-1971
Evolution and Heredity.....	1972-1980
Special Mental Conditions.....	1981-2010
Nervous and Mental Disorders.....	2011-2061
Personality and Character.....	2062-2083
Social Functions of the Individual.....	2084-2158
Industrial and Personnel Problems.....	2159-2185
Educational Psychology.....	2186-2231
Biometry and Statistics.....	2232-2235
Mental Tests.....	2236-2244
Childhood and Adolescence.....	2245-2257

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## AUTHOR INDEX

- Abraham, K., 1981, 1982  
 Ach, N., 2062  
 Achilles, E. M., 2087  
 Adler, A., 2084  
 Adler, C. A., 2063  
 Adlerowna, M., 1817  
 Al, W., 2186, 2187  
 Akhmeteli, M., 1933, 1968  
 Albo, W., 2011  
 Alcalde, W., 1865  
 Alexander, F., 1983, 1984  
 Allen, A. H. B., 1785  
 Alper, B. S., 2126  
 Alt, M., 2085  
 Anastasi, A., 1818  
 Andrews, H. L., 1880, 1802  
 Anile, A., 1786  
 [Anon.], 2236  
 Argow, W. W., 2086  
 Arkhangelskii, V. M., 1892  
 Armstrong, C. P., 2087  
 Aronson, M. J., 1803  
 Ayres, C. E., 1803  
 Baby, J., 2068  
 Bachelder, P. M., 2188  
 Bagni, C., 1985  
 Bahr, M. A., 2012, 2013  
 Baird, J. H., 2014  
 Balakchina, W. L., 1893  
 Balfour, Earl of, 1986  
 Bartlett, M. R., 2015, 2016  
 Bashmakov, V. J., 1894  
 Bates, E. S., 1803  
 Baudouin, C., 2064  
 Bauer, E. S., 1895  
 Baumgarten, P., 2065, 2066  
 Bayer, R., 2069  
 Beck, F. L., 1887  
 Beers, F. S., 2189  
 Beitel, R. J., 1819  
 Bekésy, G. v., 1820  
 Belo, J., 2090  
 Belova, T. I., 1894  
 Benedek, L., 2017, 2100  
 Benedetti, P., 2091  
 Benton, A. L., 1988  
 Bergler, E., 2010  
 Beritov, I. S., 1787, 1788,  
     1930, 1931, 1932, 1933  
 Bishop, G. H., 1866, 1867,  
     1868  
 Blackwood, B., 2092  
 Blanton, M. G., 2093  
 Blanton, S., 2093  
 Blatz, W. E., 2245, 2246  
 Bleuler, M., 2094  
 Bleuler, R., 2094  
 Bloodgood, R. S., 2018  
 Bloomfield, L., 2095  
 Blum, E., 1962  
 Boda, S. v., 1821  
 Bode, B. H., 1803  
 Bognár, C., 1789  
 Bowler, A. C., 2018  
 Boyd, T. E., 1879  
 Brachfeld, O., 2067, 2068  
 Bracken, H. v., 1972  
 Bradway, K. P., 2019  
 Bragadze, A., 1934  
 Braly, K. W., 2115  
 Brandt, H., 1935  
 Bräuer, A., 2069  
 Braunahausen, N., 1896  
 Breitinger, M., 2159  
 Bridge, M., 1853  
 Briggs, H. L., 2229  
 Bronk, D. W., 1876  
 Brose, M. T., 1916  
 Brown, R. H., 1936, 1937,  
     1989  
 Brunan, F., 1897  
 Brunswik, E., 1790  
 Bryngelson, B., 2096  
 Buehler, C., 2247  
 Bunting, H., 1869  
 Burchard, E. M. L., 2020  
 Burka, B. S., 1973  
 Buttenwieser, P., 2149  
 Buytendijk, F. J. J., 1938  
 Caesar, K. G., 1952  
 Cairns, H., 2097  
 Cartington, W., 1990, 1991  
 Carmena, M., 1974  
 Carns, M. L., 2057  
 Carrara, M., 2021  
 Carter, A. C., 2098  
 Casanova, T., 2191  
 Casselberry, W. S., 2160  
 Cattell, R. B., 2070  
 Čečetka, J., 2237  
 Chang, T. S., 2238  
 Chen, K. C., 2192  
 Choroszko, W. K., 1870  
 Chou, S. K., 2022, 2161,  
     2193  
 Christiaens, A. G., 2162  
 Cimbal, W., 2023, 2071  
 Clark, D., 1871  
 Clarke, G., 2072  
 Cleland, P. S., 2102  
 Clites, M. S., 1853  
 Cohen, F. S., 1803  
 Cohen, M., 2088  
 Collmann, R. D., 2194  
 Colos, G., 1791  
 Cook, R., 1975  
 Corey, S. M., 2153  
 Costello, H. T., 1803  
 Crawley, S. L., 1792  
 Crozier, W. J., 1822, 1939  
 Caer, J., 2248  
 Cainady, E. v., 1898, 1899  
 Curran, P. J., 2024  
 Danilewsky, B., 1872  
 Dearborn, G. V. N., 1793  
 De Cristofaro, —, 2163  
 De la Vega, P., 2025  
 Delay, J., 1823  
 Delgado, H., 1824  
 De Saussure, R., 2073  
 Diebeschlag, E., 1940  
 Diserens, C. M., 2099  
 Dockeray, F. C., 1794  
 Drever, J., 2195  
 Du Buy, G. H., 1900  
 Duker, H., 1901  
 Dulsky, S. G., 1854  
 Dunlap, K., 1795  
 Durant, W., 1803  
 Dwelshauvers, G., 1855  
 Eaton, M. L., 1902  
 Ebbecke, U., 1873  
 Eaton, M. L., 1902  
 Ebbecke, U., 1873  
 Eccles, J. G., 1874, 1875  
 Eckstein, L., 2100  
 Edman, I., 1803  
 Engle, T. L., 2196  
 Ernst, E., 1796  
 Eurich, A. V., 2197  
 Evans, L. T., 1941  
 Evans, S., 1942  
 Fei, C. H., 2249  
 Feng, T. P., 1903, 1904  
 Ferguson, L. W., 2164  
 Finck, E. M., 2198  
 Fischer, G. H., 1905  
 Fischer, M. H., 1825  
 Flewellings, R. T., 1803  
 Floyd, W. F., 1797, 1906  
 Fontégne, J., 2165  
 Forrier, J., 1856  
 Kaméneva, E., 2033  
 Forstgy, D., 2101  
 Francois, M., 2239  
 Frank, B., 2102  
 Frank, C., 2026  
 Franklin, S., 2250  
 Freud, S., 1992  
 Friedman, M. B., 1978  
 Friedmann, G., 2088  
 Frias, K. v., 1943  
 Gammon, G. D., 1876  
 Garma, A., 2027  
 Buehler, C., 2247  
 Bunting, H., 1869  
 Burchard, E. M. L., 2020  
 Burka, B. S., 1973  
 Buttenwieser, P., 2149  
 Buytendijk, F. J. J., 1938  
 Caesar, K. G., 1952  
 Cairns, H., 2097  
 Cartington, W., 1990, 1991  
 Carmena, M., 1974  
 Carns, M. L., 2057  
 Carrara, M., 2021  
 Carter, A. C., 2098  
 Casanova, T., 2191  
 Casselberry, W. S., 2160  
 Cattell, R. B., 2070  
 Čečetka, J., 2237  
 Chang, T. S., 2238  
 Chen, K. C., 2192  
 Choroszko, W. K., 1870  
 Chou, S. K., 2022, 2161,  
     2193  
 Christiaens, A. G., 2162  
 Cimbal, W., 2023, 2071  
 Clark, D., 1871  
 Clarke, G., 2072  
 Cleland, P. S., 2102  
 Clites, M. S., 1853  
 Cohen, F. S., 1803  
 Cohen, M., 2088  
 Collmann, R. D., 2194  
 Colos, G., 1791  
 Cook, R., 1975  
 Corey, S. M., 2153  
 Costello, H. T., 1803  
 Crawley, S. L., 1792  
 Crozier, W. J., 1822, 1939  
 Caer, J., 2248  
 Cainady, E. v., 1898, 1899  
 Curran, P. J., 2024  
 Danilewsky, B., 1872  
 Dearborn, G. V. N., 1793  
 De Cristofaro, —, 2163  
 De la Vega, P., 2025  
 Delay, J., 1823  
 Delgado, H., 1824  
 De Saussure, R., 2073  
 Diebeschlag, E., 1940  
 Diserens, C. M., 2099  
 Dockeray, F. C., 1794  
 Drever, J., 2195  
 Du Buy, G. H., 1900  
 Duker, H., 1901  
 Dulsky, S. G., 1854  
 Dunlap, K., 1795  
 Durant, W., 1803  
 Dwelshauvers, G., 1855  
 Eaton, M. L., 1902  
 Ebbecke, U., 1873  
 Eaton, M. L., 1902  
 Ebbecke, U., 1873  
 Eccles, J. G., 1874, 1875  
 Eckstein, L., 2100  
 Edman, I., 1803  
 Engle, T. L., 2196  
 Ernst, E., 1796  
 Jasper, H. H., 1802, 1880  
 Jenny, F., 1897  
 Jón, J., 2061  
 Johnson, A. P., 2074, 2113,  
     2170, 2171  
 Jones, E. S., 2204  
 Jones, H. E., 1973  
 Jones, L. M., 1911  
 Jones, L. W., 1858  
 Jones, A., 1952  
 Jorgensen, C., 2194  
 Kadner, S., 2114  
 Kallen, H. M., 1803  
 Kaméneva, E., 2033  
 Katz, D., 2115  
 Khiltachenko, A. E., 1912  
 Kistner, K., 2116  
 Klages, L., 2117  
 Klemm, O., 1831  
 Knight, R., 2241  
 Knoll, E., 2234  
 Knopf, O., 2134  
 Knower, F. H., 2118  
 Koch, H., 1799  
 Kofika, K., 1803  
 Kottan, A., 2172  
 Kowalski, W., 1832  
 Kresser, G., 2035  
 Kreutz, M., 1913  
 Krinner, M., 1953  
 Krober-Keneth, L., 2173  
 Kroh, O., 1976  
 Krueger, F., 2119  
 Krywanek, F. W., 1954  
 Kuhn, H. J., 2255  
 Kuo, Z. Y., 1804, 1805  
 Kutzman, O., 2120  
 Goldberg, A. P., 1909  
 Goldman, H., 1897  
 Good, C. V., 2199  
 Gordon, B. L., 1827  
 Gottschaldt, K., 2105  
 Granit, R., 1828, 1829  
 Gray, R. A., 2200  
 Gray, W. S., 2201  
 Greenspan, I., 2233  
 Groeben, M. v. d., 1800  
 Grossnickle, F. E., 2202  
 Gummersbach, H., 2106  
 Gundlach, W. B., 2203  
 Hall, M. E., 2107  
 Hanna, J. V., 2166  
 Hasama, B., 1944  
 Hasegawa, T., 1945  
 Hayward, R. S., 2251  
 Hegge, T. G., 2028  
 Heinbecker, P., 1867, 1868  
 Helmoortel, J., 1830  
 Herter, K., 1946, 1947  
 Hedorffier, M. B., 1877,  
     1888  
 Hetzer, H., 2247  
 Hildreth, M. H., 2212  
 Hilferding-Hönigsberg, M.,  
     2252  
 Hische, W., 2167  
 Ho, C. J., 2168  
 Hoagland, H., 1878  
 Hoffer, W., 1993  
 Holst, E. v., 1948, 1949,  
     1950  
 Holt, E. B., 1803  
 Hook, S., 1803  
 Horowitz, E. L., 1801, 1910  
 Horst, P., 2233  
 Hsiao, H. H., 1857, 2029,  
     2169  
 Hudson, L., 1908  
 Hughes, J., 1871  
 Huizinga, J., 1951  
 Hunnun, I. F., 1879  
 Hunt, A. M., 2108  
 Husband, R. W., 1994  
 Huth, A., 2109  
 Illyefalvy, I. L., 2253  
 Irving, J. A., 1803  
 Israel, N., 2110  
 Jackson, J. A., 2030, 2031  
 Jaenach, E., 2111, 2112,  
     2132  
 Janet, P., 2032  
 Jasper, H. H., 1802, 1880  
 Jenny, F., 1897  
 Jón, J., 2061  
 Johnson, A. P., 2074, 2113,  
     2170, 2171  
 Jones, E. S., 2204  
 Jones, H. E., 1973  
 Jones, L. M., 1911  
 Jones, L. W., 1858  
 Jones, A., 1952  
 Jorgensen, C., 2194  
 Kadner, S., 2114  
 Kallen, H. M., 1803  
 Kaméneva, E., 2033  
 Katz, D., 2115  
 Khiltachenko, A. E., 1912  
 Kistner, K., 2116  
 Klages, L., 2117  
 Klemm, O., 1831  
 Knight, R., 2241  
 Knoll, E., 2234  
 Knopf, O., 2134  
 Knower, F. H., 2118  
 Koch, H., 1799  
 Kofika, K., 1803  
 Kottan, A., 2172  
 Kowalski, W., 1832  
 Kresser, G., 2035  
 Kreutz, M., 1913  
 Krinner, M., 1953  
 Krober-Keneth, L., 2173  
 Kroh, O., 1976  
 Krueger, F., 2119  
 Krywanek, F. W., 1954  
 Kuhn, H. J., 2255  
 Kuo, Z. Y., 1804, 1805  
 Kutzman, O., 2120  
 Lafora, G., 2036  
 Lambert, E. F., 1914  
 Lane, R. F., 1881  
 Lange, L., 2256  
 Langevin, R., 2038  
 Latmanisowa, L. W., 1915  
 Laubry, C., 1916  
 Lauer, A. R., 2174  
 Lázár, K., 2257  
 Langevin, R., 2038  
 Latmanisowa, L. W., 1915  
 Laubry, C., 1916  
 Lauer, A. R., 2174  
 Lászár, K., 2257  
 Lazarev, P. P., 1882  
 Lecky, P., 2075  
 Ledent, R., 2175  
 Lee, H. N., 2205  
 Lee, P. T., 2205  
 Lehmann, F. R., 2121  
 Leible, O., 1859  
 Lentz, T. F., 2122  
 Lepšajka, M. W., 1909  
 Lersch, P., 2123  
 Leuba, J., 1995  
 Levy, D. M., 1955  
 Levy, E. M., 2037  
 Lévy, J. M., 2124  
 Lewy, F. H., 1881, 1883  
 Lindsey, D. B., 1917  
 Lippert, E., 2125  
 Lissmann, H., 1956  
 Liu, C. C., 2080  
 Lloyd-Evans, A., 2206  
 Locke, A., 1803  
 Lockwood, M. R., 2053  
 Logden, G. E., 2126  
 Lombard, E. C., 2207  
 Löwenbach, H., 1825  
 Lu, T. W., 1970  
 Luce, H. R., 2038  
 Lüscher, E., 1833  
 Maaske, C. A., 1869  
 Maby, J. C., 1996  
 MacAdam, D. L., 1834  
 Mády, I., 2208  
 Mall, G. D., 2127  
 Maisberg, B., 2039  
 Marsh, L. C., 2040  
 Marshall, C. R., 1997  
 Martens, E. H., 2209  
 Marul, K., 2041  
 Masuhr, H., 2176  
 Maublanc, R., 2088  
 Mayer, J., 2128  
 Mayer, L. L., 1835  
 Mayer, L. M., 1836  
 McGee, R. A., 2129  
 McKendree, O. J., 2042  
 Meek, W. J., 1869  
 Meier, C., 2043  
 Meng, H., 2210  
 Menninger, K. A., 1998  
 Michlin, M. S., 1909  
 Milici, P., 2044  
 Millardet, G., 2130  
 Millichamp, D. A., 2245  
 Mineur, H., 2088  
 Minaki, L., 2045  
 Mischchenko, M. N., 1999  
 Missiro, W., 1918  
 Mjøen, J. A., 1977  
 Molony, W. O., 2131  
 Morgan, A. E., 1803  
 Moritz, K., 2211  
 Müller, M., 2046  
 Murchison, C., 1806  
 Murphy, A. E., 1803  
 Murray, R. S. E., 2132  
 Naegelsbach, H., 2047  
 Nagel, E., 1803  
 Nagge, J. W., 1919  
 Narikashvili, I., 1834  
 National Occupational Conference, 1807  
 Needham, J. G., 1837, 1838  
 Ngoywang, G., 1885  
 Ni, C. F., 1808  
 Noetzel, E. S., 2212  
 Nolf, P., 1886  
 Noll, V. H., 1860  
 Northby, A. S., 2213  
 Noastip, L. v., 2076  
 Nuber, H., 2177  
 Nyseen, R., 1830  
 Oehl, W., 1861  
 O'Leary, A. J., 1809  
 Opelal, L. E., 2133  
 Ourieff, F. J., 1920  
 Overstreet, H. A., 1803  
 Pan, S., 1839, 2134  
 Parain, C., 2088  
 Pascal, J. I., 1840  
 Patry, F. L., 2178  
 Peatman, J. G., 2233  
 Penniman, T. K., 2135  
 Pepper, O. H. P., 1849  
 Perera, C. A., 1810  
 Peters, G., 1927  
 Petersen, W. F., 2048  
 Pfahl, G., 2077  
 Pferdsdorff, C., 1845  
 Phillips, M., 2136  
 Pincus, G., 1939  
 Ping, C., 1957  
 Porchat, R., 1811  
 Potter, H. W., 2049  
 Prenant, M., 2088  
 Pritchard, R. A., 2214  
 Quercy, P., 2050  
 Rademaker, G. G. J., 1958  
 Randall, J. H., Jr., 1803  
 Rancksburg, F., 1841, 2000,  
     2001  
 Rashevsky, N., 2137  
 Redl, F., 2215  
 Ribaud, E., 1959  
 Rickard, G. E., 2216  
 Rieffert, J., 1812  
 Ringland, M. C., 2246  
 Rodewald, W., 1960  
 Rogues de Fursac, J., 2051  
 Rosenbluth, A., 1914  
 Roucek, J. S., 2138  
 Rowe, E. C., 2139  
 Rubenstein, B., 1829  
 Sacha, H., 2002, 2078  
 Sacks, M. J., 2087  
 Salaw, H., 2140  
 Sánchez y Sánchez, D.,  
     1887  
 Sanford, J. W., 2141  
 Sanford, R. N., 2142  
 Sartain, A. Q., 1813  
 Sauvageot, A., 2088  
 Scammon, R. E., 1877, 1888  
 Schaefer, H., 1873  
 Schaefer, K., 1889  
 Schelling, H. v., 2234  
 Scheminsky, F., 1961  
 Schermann, L. G., 1931  
 Schilder, P., 2024  
 Schiller, P. v., 2052  
 Schmeing, K., 2003  
 Schmid, G., 2004  
 Schneider, H. W., 1803  
 Schöle, H., 1842  
 Schoneil, F. J., 2217  
 Scripture, E. W., 2143  
 Schröder, G., 1922  
 Schuster, W., 2079  
 Schütz, K., 1923  
 Sedlaczek, S., 2242  
 Segers, J. E., 2144  
 Seidler, R., 2218  
 Sheldon, W. H., 1803  
 Shen, C. O., 2243  
 Shen, E. C., 2080  
 Shen, H. M., 2219  
 Simon, A., 2220  
 Simoneit, M., 2145  
 Skaggs, E. B., 1924  
 Skinner, B. F., 1925  
 Sklyarov, Ya. P., 1926  
 Skottowe, I., 2053  
 Smith, H. P., 2221  
 Smith, T. V., 1803  
 Somers, G. T., 2222  
 Sondén, T., 2146  
 Spiel, O., 2223  
 Spindler, M., 1962  
 Spranger, E., 1814  
 Steinhausen, W., 1963  
 Stekel, W., 2224  
 Störning, G. E., 2054  
 Stott, L. H., 1843  
 Straub, W., 1862  
 Stroop, J. R., 1863

Stuart, C. E., 206  
 Sulyom-Schulman, —  
 Sun, M. C., 2223  
 Sutte, I. D., 188  
 Szwandi, L., 1979  
 Tai, S. C., 2226  
 Tang, V., 1964  
 Taylor, W. S., 21  
 Téllez, J., 2244  
 Ter Braak, J. W.  
 Teschitz, K., 219  
 Thauer, R., 1927  
 Thermon, P. O.  
 Thienpont, R. M.  
 Thomas, C. D.  
 Thorndike, E. L.  
 Tiunina, V. N.  
 Tomilin, M. I.  
 Trabue, M. R.  
 Truestell, L. E.  
 Tsao, Z. C., 2238  
 Tserete, M., 19  
 Ulrich, H., 1968  
 U. S. Employment  
     2179  
 Valentine, C. W.  
 Valentine, W. L.  
 Validov, I., 1929  
 Velasco, C., 2244  
 Vereshchagin, N.  
 Veres, E. v., 1968  
 Vernon, H. M.  
 Verhofen, A., 1968  
 Vetter, A., 1916  
 Vialle, A., 2081  
 Vile, J., 2056  
 Voegelin, E., 219  
 Vogt, A., 1846  
 Vreeland, F. M.  
 Wallack, W. M.  
 Wallon, H., 2084  
 Wang, G. H., 19  
 Washburn, A. C.  
 Weill, G., 1845  
 Weiss, P., 1800, 1801  
 Welker, A., 2133  
 Wellens, L., 215  
 Wenzl, A., 2003  
 White, J. H., 1968  
 Williams, M. W., 2000  
 Williams, R. D.  
 Willoughby, R.,  
     2009  
 Wilson, J. G., 1968  
 Wingfield, E. C.  
 Winterstein, A. C.  
 Wirth, W., 1868  
 Witz, J., 1799  
 Wittkopp, E., 1923  
 Wittmaack, K., 1923  
 Wittmann, J., 1923  
 Wolberg, L. R., 2059  
 Wolf, C., 2059  
 Wolf, E., 1971  
 Wolters, A. W.  
 Wood, T. W., 2000  
 Worobiew, A., 1968  
 Wright, J., 215  
 Wu, C. F., 1968  
 Wu, S. H., 1957  
 Wulfinghoff, W.,  
     2063  
 Xirú, J., 2231  
 Yang, S. Y., 212  
 Vermaux, —, 212  
 Zeise, L., 2158  
 Zahl, P. A., 1968  
 Zarkh, M. N., 1968  
 Zawadski, B., 1968  
 Zeiss, L., 2158  
 Zerrahn-Wolf, G.  
 Ziegler, H. W., 2185  
 Zilian, E., 2185  
 Zankó, L., 2061

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Vol. X, No. 4

April, 1936

## GENERAL

1785. Allen, A. H. B. **The self in psychology.** London: Kegan Paul, 1935. Pp. 282. 10/6.—This is a critical survey, with footnote references, of a large amount of work, ancient and modern, on the self. After preliminary statements the author considers first the self in cognition and then the self in relation to bodily life and instincts. His general conclusion is that there is adequate evidence for an active functioning conscious self, distinct from the bodily organism but closely correlated therewith. The correlation is largely effected through the medium of feelings.—F. C. Bartlett (Cambridge, England).

1786. Anile, A. **La "fisiologia integrale" di M. L. Patrizi.** (The "integral physiology" of M. L. Patrizi.) *Riv. Psicol. norm. pat.*, 1935, 31, 156-158.—A discussion of the work and theories of M. L. Patrizi. His major interests were on cerebral functioning in general and on physical and anthropological studies of men of genius in particular.—T. M. Abel (Progressive Education Association).

1787. Beritov, I. S. **Zhivaya vozбудимая система и основные законы ее деятельности.** (The living irritable system and the fundamental laws of its function.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 237-244.—General physiology has been influenced by two philosophical trends, the idealistic and the materialistic. This influence has remained unrecognized because of the naive eclecticism of most physiologists. The physiological unit is the cell, and cells group themselves into diverse colloid formations. Stimulation causes a dynamic readjustment of the system which is not a simple summation of the single isolated reactions. This shows itself in the phenomena of resting and action potentials, refractory period, and supernormal excitability.—L. A. Riggs (Clark).

1788. Beritov, I. S. **Fiziologiya i nauka o povedenii.** (Physiology and the science of behavior.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 248-256.—Students of animal behavior (Watson, Lashley, Pavlov) did well to divorce their science from the dominance of a psyche, as does physiology. But they erred insofar as they attempted to analyze in terms of isolated components (reflexes, tropisms) because the normal behavior of animals and men does not exemplify the special phenomena studied under laboratory conditions. Phylogenetically, tropisms were the first form of behavior. But they have been largely superseded in the higher animals by individually acquired behavior. This is directed by a goal and conditioned by special aspects of the environment. This type of behavior cannot be studied by the techniques of reflex physiology, but must be observed by the use of either (1) the maze, (2) the Beritov method of freedom of movement, or (3) Köhler's *Umweg* method.—L. A. Riggs (Clark).

1789. Bognár, C. **Psychologia.** (Psychology.) Budapest: 1935. Pp. 334.—I. Cognition. II. Feeling. III. Drives. IV. Unity of psychic life. V. Single branches of psychotechnics: (1) pathopsychology, (2) collective psychology, (3) differential psychology, (4) genetic psychology, (5) parapsychology. VI. History and chief schools of psychology. Bibliography and index.—P. Ranschburg (Budapest).

1790. Brunswik, E. **Experimentelle Psychologie in Demonstrationen.** (Experimental psychology in demonstrations.) Vienna: Springer, 1935. Pp. 166.—The author, who has for several years offered an introductory course in experimental psychology at the University of Vienna, describes a large number of experiments which demonstrate fundamental laws and methods. Theoretical discussions connect the isolated demonstrations into a survey of present-day psychology. The systematic structure of the book made it necessary to arrange experiments according to the problems involved rather than according to the traditional sense departments. Examples are chosen suitable for class demonstrations, which explains a preponderance of problems of perception. Special attention is given to such more recent topics as Gestalt, objective constancy, eidetics, thinking, personality types, social psychology. Wherever necessary the statistical treatment of data obtained is explained. Apparatus is described in detail, with 135 illustrations, and provisions are made for student participation in practically every experiment. Experiments are listed in seven principal divisions: sensory qualities, perception of Gestalt, space perception, memory and thinking, sensation, activity, and personality types. Enough material is given to occupy a two-semester course.—H. Beaumont (Kentucky).

1791. Colosi, G. **Organismi e vita.** (Organisms and life.) Milan: Hoepli, 1935. Pp. 224.—A discussion of fundamental questions of general biology.—T. M. Abel (Progressive Education Association).

1792. Crawley, S. L. **Study outline for general psychology.** New York: Prentice-Hall. Pp. 223. \$1.50.—Each chapter presents an introductory discussion or an outline of fundamental topics, a series of work projects or problems and review questions, and a bibliography. Many blank outline diagrams to be filled in and labelled are included in the exercises. All pages are perforated so that completed work sheets may be handed to the instructor for evaluation. The book covers the range of current American psychology and is flexible enough to fit either a one-semester or a two-semester course.—O. N. deWeerdt (Beloit).

1793. Dearborn, G. V. N. **Communication: William James's scientific integrity.** *J. abnorm. soc. Psychol.*, 1935, 30, 262-264.—Congratulations are extended on the article by Maurice Baum in which

William James's interest in psychical research was characterized as "genuine and profound as it was cautious and scrupulous in character." No intellectual narrowness is narrower than that which pretends to deem an interest in psychical research an "unpardonable aberration" or a "regrettable flaw" in a personality as true and rich and catholic to all truth as that of William James.—C. H. Johnson (Boston Psychopathic Hospital).

1794. Dockeray, F. C., & Valentine, W. L. **An analysis of the elementary psychology course at Ohio State University.** *J. appl. Psychol.*, 1935, 19, 503-520.—The general objectives are the acquisition of facts and principles of human behavior, the practical applications of psychological principles to all the problems and contacts of daily life, the acquisition of a technical vocabulary, the acquiring of skill in the application of scientific method to problems of human behavior, and the elimination of widespread superstitions and misconceptions. These objectives include methods such as skill in making observations, noting negative cases, counting and measuring the results of investigations, presenting results, and drawing conclusions and inferences.—M. B. Lynaugh (Psychological Corporation).

1795. Dunlap, K. **Chronometric devices in psychological research.** *J. gen. Psychol.*, 1936, 14, 3-30.—A detailed study of the operating characteristics of a number of instruments that may be used for measuring time, treating such factors as accuracy, reliability, convenience, durability, limitations, and electrical constants. The instruments are treated in the following order: stop watches, calibrating devices, A.C. vibrator, magnetic markers, impulse counters, chronoscopes (Hipp, synchronous motor, d'Arsonval, galvanometer, condenser and other types) and tapping equipment.—H. Schlosberg (Brown).

1796. Ernst, E. **Ein Reiz- und Zeitsignal für photographische Registrierung.** (A stimulation and time marker for photographic recording.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 710-714.—M. A. Rubin (Clark).

1797. Floyd, W. F. **Apparatus for the continuous recording of potentials and E. M. F.'s from the skin.** *J. Physiol.*, 1935, 85, 28-30P.—M. A. Rubin (Clark).

1798. Gaskill, H. V. **Contents of a course in psychology and personality.** *J. soc. Psychol.*, 1935, 6, 374-379.—Outline of a course given at Iowa State College with list of 38 sources (largely textbooks).—E. B. Newman (Swarthmore).

1799. Gildmeister, M., Koch, H., & Wirtz, J. **Eine neue Zeitschreibemethode.** (A new type of time marker.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 401-405.—M. A. Rubin (Clark).

1800. Groeben, M. v. d. **Konstruktive Psychologie und Erlebnis.** (Constructive psychology and experience.) *Göttinger Forsch.*, 1934, No. 6. Pp. 173.—R. R. Willoughby (Clark).

1801. Horowitz, E. L. **Study guide to accompany Gardner Murphy's "A Brief General Psychology."** New York: Harper, 1935. Pp. 141.—A study guide for elementary students, containing for each chapter:

(1) a list of preliminary questions, (2) an outline of the essential points in the chapter, and (3) a list of multiple-choice questions.—J. McV. Hunt (Nebraska).

1802. Jasper, H. H., & Andrews, H. L. **A multi-range vacuum tube chronometer.** *J. gen. Psychol.*, 1936, 14, 248-256.—A rugged, simple and inexpensive portable chronometer is described. A condenser charged through a Wheatstone bridge, controls the flow through a micro-ammeter by means of a vacuum tube circuit, operating on 110-volt 60-cycle A.C. Curves for 5 sensitivities ranging between .005 and 5 seconds are furnished. Any one of these ranges can be selected by turning a switch. The meter employed permits readings accurate to  $\pm 2.5\%$ , and will record regardless of which of the two controlling keys is opened first.—H. Schlosberg (Brown).

1803. Kallen, H. M., & Hook, S. [Eds.] **American philosophy today and tomorrow.** New York: Lee Furman, 1935. Pp. viii + 518. \$3.75.—A symposium of viewpoints, largely on social philosophy and current metaphysical and ethical theory, by the editors and M. J. Aronson, C. E. Ayres, E. S. Bates, B. H. Bode, F. S. Cohen, H. T. Costello, W. Durant, I. Edman, R. T. Flewelling, E. B. Holt, J. A. Irving, K. Koffka, A. Locke, A. E. Morgan, A. E. Murphy, E. Nagel, H. A. Overstreet, J. H. Randall, Jr., H. W. Schneider, W. H. Sheldon, T. V. Smith, P. Weiss, and M. Williams. Each essay is preceded by an account of the life of the author, with accent on the special intellectual circumstances.—R. R. Willoughby (Clark).

1804. Kuo, Z. Y. [The fundamental principles of behavior.] Shanghai: World Book Co., 1935. Pp. 72. \$40 Mex.—The main thesis of this book, which is an abridged form of part of a larger book entitled *Principles of Praxiology*, is to discuss the complexity of behavior and the inadequacy of the neurological concept of reflex action for its explanation. A chapter is devoted to the discussion of each of the following topics: general characteristics of a stimulus, intensity of stimuli, mutual relationships of stimuli, modification and substitution of the action of stimuli, and general characteristics of a response. The author argues that all behavior is composed of physiological changes which in turn are physical and chemical changes, and consequently are transformations of energy. Furthermore, since all behavior is passive, mechanical, and energy-transforming in nature, all mystical concepts such as soul, consciousness, mind, etc., may be dispensed with. A behavior response would be aroused not by the action of any single stimulus alone, but by the resultant action of the mutual relationships of a multitude of stimuli. The determinants of behavior are enumerated.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1805. Kuo, Z. Y. [The scope of praxiology.] Shanghai: World Book Co., 1935. Pp. 102. \$50 Mex.—The author refutes all schools of psychology, including structuralism, functionalism, objectivism, Gestalt psychology, and behaviorism, and advocates that praxiology be established. According to the author, praxiology as one kind of biological science deals with the reactions of human and other animals

to environmental stimuli. Its method is the same as that used in physics, chemistry, and other biological sciences. Praxiology uses physiological method, which is much more accurate and reliable than introspection. Its fundamental problems lie in the studies of the physiology and development of behavior. A praxiologist would neither advocate any "ism" nor create any "system." He is fundamentally a physiologist and an embryologist, and would explain all behavior on the basis of experimental facts. The concept of consciousness is condemned, and it is argued that the so-called "conscious phenomena" may be explained in terms of physiology, and that with the improvement of the experimental method and technique all may be examined by the method of physiology and development of behavior, without any use of introspection. It is also argued that all behavior is passive, being aroused by stimuli, and that there is no "spontaneous behavior" and consequently no such thing as "purpose" or "motive." Just like physical and chemical phenomena, behavior is extremely mechanical, though undoubtedly more complex in nature. The determinants of behavior are the mutual relationships of the various stimuli confronted, and the past history, bodily structure, and physiological conditions of the organism, rather than the organism itself. Thus the aim of praxiology is to find out principles and laws to serve as a basis for the prediction and control of future behavior. Finally, the existence of heredity is also denied and the concept of "heredity of behavior" is condemned as simply a lazy idea. Being an abridged form of one part of a larger book entitled *Principles of Praxiology*, the English version of which is in preparation, this book may be regarded as the foundation of the author's praxiology; it contains the following six chapters: (1) from psychology to praxiology, (2) the scope of praxiology, (3) a comparison of the methods of psychology and praxiology, (4) the place of the concept of consciousness in praxiology, (5) the place of purposivism in praxiology, and (6) praxiology and heredity.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1806. Murchison, C. [Ed.] *The journal of psychology*. Worcester, Mass.: Dorotea P. Murchison. Vol. 1, No. 1, 1936. \$5.00 per vol.—Approved manuscripts are to be published immediately, as separates; a completed volume will consist of enough of such separates to make up 320 pages.—R. R. Willoughby (Clark).

1807. National Occupational Conference. [Eds.] *Occupational index*. New York: National Occupational Conference. Vol. 1, No. 1, January, 1936. Monthly. \$5.00 per year.—A continuous monthly bibliographical listing of occupational information in current books, pamphlets, and periodicals. Annotated and classified.—R. R. Willoughby (Clark).

1808. Ni, C. F. [Psychological institutions in America and Europe.] *Naifun*, 1934, 10, No. 2, 9-14.—The author very briefly reports the results of his visits to 16 psychological institutions in America and Europe, with a few words of impression and comment on each. These included the psychological

laboratories of the University of Chicago, Mooseheart High School, Illinois University, Washington University, Johns Hopkins University, Princeton University, Yale University, Harvard University, Clark University, Columbia University, Institute de Psychologie de l'Université de Paris, Psychologisch Institut der Universität Göttingen, Psychologisch Institut der Universität Berlin, Psychologisch Institut der Universität Leipzig, University of Munich, and University of Zürich. General impressions led the author to conclude that (1) there is still lack of cooperative spirit between psychology and other sciences, though the Institute of Human Relations of Yale University has started in this direction; (2) psychology still lacks systematic and extensive experimentation; (3) there is need for better means of communication among psychologists; (4) except in the United States and Great Britain, psychologists are in need of good organization; (5) psychology needs better methods of propaganda, such as broadcasting of popular psychological lectures in America, 1931-1932.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1809. O'Leary, A. J. *A simple stroboscope*. *J. opt. Soc. Amer.*, 1935, 25, 374-380.—The stroboscope described involves the use of a rotating light slit as a source of illumination. The slit may be a diameter or radius of a rotating cylinder concentric with the observed disk, or a slit parallel to the cylinder axis to be used in viewing vibrating bodies. Photographs show patterns obtained for various disks with different ratios between the speeds of the disk and slit. Equations are derived showing the width and number of vanes and their detail and intensity in the stroboscopic images of an object disk with symmetrical vanes, with variations in the width of the illuminating slit and in the relative speeds of rotation when object and slit are revolving in the same or in opposite directions.—M. R. Stoll (Mass. Eye and Ear Infirmary).

1810. Perera, C. A. Albrecht von Graefe, founder of modern ophthalmology. His life and works. *Arch. Ophthal.*, Chicago, 1935, 14, 742-773.—M. R. Stoll (Mass. Eye and Ear Infirmary).

1811. Porchat, R. [Ed.] *Archivos da Instituto de Educação*. (Archives of the Institute of Education.) São Paulo: University of São Paulo. Vol. 1, No. 1, 1935.—R. R. Willoughby (Clark).

1812. Rieffert, J. *Der Leib-Seele-Zusammenhang als Gesetzmässigkeit zweiter Ordnung*. (The body-mind relation as lawfulness of the second order.) *Neue psychol. Stud.*, 1934, 12, No. 2, 51-58.—Natural laws, conceived as immutable, are called laws of the first order. Natural laws, conceived as variable, that is, as functions of other variable factors, are called laws of the second order. It is logically permissible to assume systems which in one respect exhibit laws of the first order and which are also members of wider systems exhibiting laws of the second order; the processes of such a system would be resultants of both types of causal factors. This reasoning can be applied to nerve physiology and consciousness. Nerve activity is part of a system exhibiting laws of the first order; it may also belong to a larger system, including

consciousness, exhibiting laws of the second order. That is, "unaccounted variations" in nerve activity may be functions of conscious factors. The reverse is also possible. This might be called a theory of simultaneous interaction between mind and body.—*K. F. Muensinger* (Colorado).

1813. Sartain, A. Q. *Psychology at Southern Methodist University*. *Psychol. Exch.*, 1935, 4, 50-51.—A brief history of the department and a statement of aims and policies, courses offered, and recent research problems.—*H. Cisney* (Worcester State Hospital).

1814. Spranger, E. *Bemerkungen zum Struktur-begriff in den Geisteswissenschaften*. (Remarks about the concept of structure in the mental sciences.) *Neue psychol. Stud.*, 1934, 12, No. 2, 81-96.—Perceiving, reasoning and imagining take place within mental schemata or structures. It is the psychologist's task to study such structures which give meaning and significance to objective behavior.—*K. F. Muensinger* (Colorado).

1815. Thorndike, E. L. *Science and values*. *Science*, 1936, 83, 1-8.—Judgments of value are judgments of fact which concern consequences. The ratings of acts by their consequences are justified in the end by satisfactions and annoyances for some sentient being. Values are amenable to scientific study since they reside in satisfactions and annoyances of sentient beings. Values are difficult to determine scientifically, since they depend upon "knowledge about sentient beings, present and future, their wants, the right weights to attach to each of these, and the consequences of the act or fact in question to each of them." An analysis of the expenditures in this country for a year showed that more was paid to maintain self-respect and the good opinion of others and avoid scorn, derision, and shame than for food and clothing. This should be considered an indication of the wants of society. By strengthening good wants and in attaching desire to good objects, men can be taught to find satisfaction in useful work, etc.—*R. Goldman* (Clark).

1816. Vetter, A. *Die Formung des Erlebens in der Zeit*. (The formation of experience within time.) *Neue psychol. Stud.*, 1934, 12, No. 2, 97-111.—Individual life is experienced as a stream; yet we also experience points and periods.—*K. F. Muensinger* (Colorado).

[See also abstracts 1898, 2128.]

#### SENSATION AND PERCEPTION

1817. Adlerówna, M. *Dwa rodzaje spostrzeżeń i ich struktura*. (Two kinds of perception and their structure.) *Kwart. psychol.*, 1935, 7, 1-24.—The Gestalt nature of object and sense perceptions is stressed.—*T. M. Abel* (Progressive Education Association).

1818. Anastasi, A. *The estimation of areas*. *J. gen. Psychol.*, 1936, 14, 201-225.—The areas of 7 geometrical figures, each at three absolute levels, were judged in terms of a scale of 12 triangles or

squares, by 224 subjects. There were no sex differences. Comparison figures tended to be overestimated. The amount of over-estimation varied with the area and the linear magnitude of the figure. Introspective reports are presented, as well as an extensive review of the pertinent literature.—*H. Schlosberg* (Brown).

1819. Beitel, R. J. *Inhibition of threshold excitation in the human eye*. *J. gen. Psychol.*, 1936, 14, 31-61.—The threshold for the dark-adapted human eye was determined, using a small patch illuminated for 17 milliseconds as the stimulus. The effects on this threshold of the simultaneous presentation of patches of different intensity and spatial separation were measured. When the intensity of the inducing patch was of the same order of magnitude as that of the stimulus, the threshold was found to be lowered, indicating summation. With a more intense inducing patch the threshold returned to normal, but with a very intense inducing patch the threshold was raised, indicating inhibition. These effects were more pronounced with small separations, but were still demonstrable at separations of 17' in the fovea, and of 130' in the periphery. They did not appear in binocular experiments, indicating that their mechanism is retinal. It is suggested that the time relations of the excitations are responsible for these effects.—*H. Schlosberg* (Brown).

1820. Békésy, G. v. *Ueber akustische Reizung des Vestibularapparatus*. (The acoustic stimulation of the vestibular apparatus.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 59-77.—From experiments with a model of the ear, the author concludes that sound causes a whirling movement of the perilymph. This causes a pressure which is transmitted to the otolith apparatus and results in equilibrium disturbances. Sound pressures greater than 100 dynes per cm.<sup>2</sup> cause disturbances which can be perceived and registered by normal humans. The effects of vibratory and continuous tones are described. The stimulation threshold, the difference limen, and the reaction time of these equilibrium disturbances are measured. Some subjective phenomena resulting from hearing very strong tones are described.—*M. A. Rubin* (Clark).

1821. Boda, S. v. *Die Organisation der Empfindungen*. (The organization of sensations.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 298-301.—*H. Beaumont* (Kentucky).

1822. Crozier, W. J. *On the variability of critical illumination for flicker fusion and intensity discrimination*. *J. gen. Physiol.*, 1936, 19, 503-523.—"From the data of experiments with bees in which threshold response is employed as a means of recognizing visual discrimination between stripes of equal width alternately illuminated by intensities  $I_1$  and  $I_2$ , it is shown that the detectable increment of intensity  $\Delta I$ , where  $\Delta I = I_1 - I_2$ , is directly proportional to  $\sigma_{I_2}$  ( $I_1$  being fixed). From tests of visual acuity, where  $I_1 = 0$  and the width of the stripes is varied,  $\sigma_{I_2} = kI_2 + \text{const.}$ ; here  $I_2 = \Delta I$  and  $\Delta I/I_2 = 1$ . When the visual excitability of the bee is changed by

dark adaptation,  $\lambda I \equiv k\Delta I (= k'\sigma_{\Delta I}) = k''I + \text{const.}$  For the measurements of critical illumination at threshold response to flicker,  $\sigma_{I_0} (= \sigma_{\Delta I}) = kI_0 = k'\Delta I + \text{const.}$  The data for critical illumination producing threshold response to flicker in the sun-fish *Lepomis* show for the rods  $\sigma_{I_0} = kI_0$  for the cones  $\sigma_{I_0} = K'(I_0 + \text{const.})$ . The data thus indicate that in all these experiments essentially the same visual function is being examined, and that the recognition of the production of a difference in effect by alternately illuminated stripes takes place in such a way that  $d(\Delta I)/d(\sigma_{I_0}) = \text{const.}$ , and that  $\Delta I$  is directly proportional to  $I$  (or  $I_0$ , depending on the nature of the experiment). It is pointed out that the curve for each of the cases considered can be gotten equally well if mean  $I$  or  $\sigma_I$  is plotted as a function of the independent variable involved in the experiment. Certain consequences of these and related facts are important for the treatment of the general problem of intensity discrimination."—*M. A. Rubin* (Clark).

1823. Delay, J. *Les astéreognosies*. (The astereognoses.) Paris: Masson, 1935. Pp. 548.—The work is divided into 6 parts: astereognosis as a disorder of tactual recognition; "ahylognosia," disorders of the intensity analyzers; "amorphognosia," disorders of the spatial analyzers; tactile symbolism; and the topography of astereognosis. There is a bibliography of some 800 titles.—*M. H. Piéron* (Sorbonne).

1824. Delgado, H. *Psicología general y psicopatología de la percepción*. (General psychology and psychopathology of perception.) *Actualid. méd. peruan.*, 1935, 1-19.—A systematic consideration of sensation and perception. There are two major causes of perceptual abnormality: (1) somatic (anatomical alteration of sense organs and of the nervous system, e.g. toxic and infectious); and (2) psychic (suggestibility, mental state, conflict, personal predisposition).—*R. M. Bellows* (U. S. E. S. Div. Standards and Research).

1825. Fischer, M. H., & Löwenbach, H. *Messende Untersuchungen über Sehferne und Sehtiefe*. (Quantitative experiments on distance and depth vision.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 609-638.—On the basis of many experiments the author rejects the "size constancy" conception and suggests that it be withdrawn as a term from psychology. Distance perception is clearly determined only in binocular vision, and therefore is dependent on convergence. Accommodation is without influence. Depth perception is determined by the parallel images on the retinae, and this is also a function of distance perception and hence of convergence. The retina with its central nervous connections and the convergence process form a functional unit.—*M. A. Rubin* (Clark).

1826. Geblewicz, E. *Z psychologii przeżycia węchowych*. (The psychology of olfactory experiences.) *Kwart. psychol.*, 1935, 7, 187-242.—A review of recent literature and a criticism of Henning's effort to apply eidetics to olfactory sensations.—*T. M. Abel* (Progressive Education Association).

1827. Gordon, B. L. *The problem of the crystalline lens*. *Arch. Ophthalm.*, Chicago, 1935, 14, 774-788.

—Reviews theories concerning the part played by the lens in vision, with particular attention to the earliest suggestions. Bibliographical notes indicate interesting unfamiliar sources.—*M. R. Stoll* (Massachusetts Eye and Ear Infirmary).

1828. Granit, R. *Two types of retinae and their electrical responses to intermittent stimuli in light and dark adaptation*. *J. Physiol.*, 1935, 85, 421-439.

—The retinal potentials of pigeons, rabbits, owls, and cats in response to intermittent stimulation with the light kept constant are recorded in light and dark adaptation. The fusion frequency falls in dark adaptation, except in the cat's eye. The reactions to flicker in dark and light adaptation are analyzed in terms of the components of the retinal action potential. Two types of retinae, E-retinae and I-retinae, are described and discussed in respect to the duality theory of adaptation.—*M. A. Rubin* (Clark).

1829. Granit, R., Rubenstein, B., & Therman, P. O. *A new type of interaction experiment with the retinal action potential*. *J. Physiol.*, 1935, 85, 34-36P.—Experiments are described in which Fry and Bartley's theory that stray light causes the retinal action potential is disproved, and their results are explained in terms of interaction. These experiments also confirm the view that the retinal action potential is localized in the synaptic layers in the eye.—*M. A. Rubin* (Clark).

1830. Helsmoortel, J., Nyssen, R., & Thienpont, R. *Un nouveau cas d'anosmie et d'ageusie complète d'origine traumatique*. (A new case of complete anosmia and ageusia of traumatic origin.) *J. belge Neurol. Psychiat.*, 1935, 35, 656-662.—The case history of a man of 54, a metal worker, whose head was caught in a machine. There was no loss of consciousness; he bled from the nose and right ear for about 36 hours, a lumbar puncture gave almost pure blood, X-ray pictures showed a cranial fracture from the right temple to the base. The patient left the hospital after one month. There was a marked diminution of the auditory acuity on the right side and the patient complained of a total loss of smell and taste, with parageusia. There also was diplopia. No Romberg, no vertigo, no Babinski, reflexes and pupils normal. Several months later the patient's wife reported a marked change in his character; he became emotional and irritable, and suffered from insomnia. While the headaches and insomnia slowly disappeared, there was practically no improvement of the characterological disorder during the three years during which the patient was under the observation of the authors. They describe the case in detail and discuss the phenomena involved in the light of recent investigations on the localization of sensory impressions. A bibliography of 20 titles is given.—*H. Sys* (Cornell).

1831. Klemm, O. *Ueber die Änderungsempfindlichkeit für optische Gestalten*. (Sensitivity to changes in optical Gestalten.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 297-298.—*H. Beaumont* (Kentucky).

1832. Kowalski, W. O zjawisku Purkiniego. (The Purkinje phenomenon.) *Kwart. psychol.*, 1935, 7, 301-310.—A criticism of Hering's and Von Kries' explanation of the Purkinje phenomenon and a defense of Seebeck's interpretation, according to which the phenomenon occurs because shorter, more refrangible waves predominate during twilight.—T. M. Abel (Progressive Education Association).

1833. Lüscher, E. Bermerkungen zu der Mitteilung von W. Hugson und E. G. Witting: An Objective Study of Auditory Fatigue. (Remarks on the communication of W. Hugson and E. G. Witting: An objective study of auditory fatigue.) *Acta oto-laryng., Stockh.*, 1935, 23, 264-266.—The report by Hugson and Witting is criticized, first for referring to an article by Lüscher concerning the tympanic membrane primarily and ignoring his two previous articles on the muscles of the inner ear. The long periods for recovery described by Hugson and Witting as fatigue were not found by Lüscher and others. Lüscher says they were due to too strong, unphysiological stimuli which caused some destruction and not to mere fatigue.—M. B. Mitchell (New Hampshire State Hospital).

1834. MacAdam, D. L. Maximum visual efficiency of colored materials. *J. opt. Soc. Amer.*, 1935, 25, 361-367.—Tristimulus values have been computed for hypothetical spectrophotometric curves of the type found to give the maximum visual reflectance factor (or transmission factor) for specified chromaticities. These computations have been based on the I. C. I. 1931 data for the normal observer for colorimetry, and on the I. C. I. Illuminants "A" and "C." By plotting the results on the I. C. I. color mixture diagram, the loci of points characterized by equal maximum efficiencies have been established. Tables have been prepared showing the maximum visual efficiency as a function of excitation purity for twenty-four dominant wave-lengths.—D. L. MacAdam.

1835. Mayer, L. L. Chronaxia and the eye. *Arch. Ophthal., Chicago*, 1935, 13, 254-262.—Mayer suggests that American investigators might advantageously study the chronaxy of the eye, which so far has been dealt with only by foreign investigators. In reviewing the literature, he mentions that the eye has been found to have a higher chronaxy than any other organ yet investigated, though this varies according to the area stimulated. When the light flash is seen peripherally, the chronaxy has been reported to be 1.2 to 1.8  $\sigma$ , while 2.2 to 3.0 are the corresponding figures for central stimulation. Since the rods and cones are not assumed to be directly stimulated, it is thought that this difference indicates greater irritability of the rod neurons. Further explanation of these measurements is required by the fact that light stimuli enduring only  $2 \times 10^{-7}$  second have been reported seen. In pathological conditions chronaxy is frequently increased, and it is suggested that determinations of chronaxy may come to have diagnostic significance.—M. R. Stoll (Massachusetts Eye and Ear Infirmary).

1836. Mayer, L. M. Light stimuli of minimal measured duration as a means of perimetry. *Arch.*

*Ophthal., Chicago*, 1935, 14, 541-553.—A neon light flash of 1/2500 second was used as stimulus in perimetric studies, eliminating the disadvantages of the moving target used by many investigators and facilitating judgments for the observer. The light flash was red, but field limits for normal subjects determined by this method were wider than for a 2-mm. red object, though not so wide as for a 2-mm. white object. The flash method gave normal field limits in cases of hysteria where tubular fields were indicated by usual methods. In pathological ocular conditions, the flash method frequently gave more clear-cut and typical field defects than those indicated by tests with moving targets.—M. R. Stoll (Massachusetts Eye and Ear Infirmary).

1837. Needham, J. G. Interpolation effects with different time intervals. *J. exp. Psychol.*, 1935, 18, 767-773.—Results considered in this paper were obtained in experiments which were supplementary to investigations reported elsewhere (*Amer. J. Psychol.*, 1934, 45, 558-567, and *J. exp. Psychol.*, 1935, 18, 530-543). It is the author's purpose to indicate complications which derive from the experimental effects of interpolated stimuli. In all cases the stimuli were auditory stimuli and the interpolated stimuli either more or less intense than the comparison stimuli. It is shown that the effect of an increase in the time interval between two stimulus presentations which comprise a comparison pair is a diminution of the effect of an interpolated stimulus upon the comparison judgment.—H. W. Karn (Pittsburgh).

1838. Needham, J. G. Some conditions of prior entry. *J. gen. Psychol.*, 1936, 14, 226-240.—This experiment is an extension of one previously reported. Six subjects were asked to report the position of a discrete tone in relation to a concurrent series of five repetitions of a second tone. There was a marked tendency for the discrete stimulus to be reported earlier in the series than it had actually occurred. A decrease in the qualitative differentiation interfered with the effect more than did intensive changes. Prior entry in a single sense department involves "a matter more comparable to an attitude than to an attribute of sensory experience."—H. Schlosberg (Brown).

1839. Pan, S. [The vertical-horizontal illusion.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 1, No. 1, 125-128.—The materials used were 5 inverted T-shaped figures whose base lines were 8 mm., 20 mm., 50 mm., 100 mm., and 200 mm. long, and whose vertical lines were much longer and increased in the same proportions. These figures were presented at a random order to each of 10 subjects for 2 times. The subjects were required to move a slip of paper along the vertical line, once upward (outward) and once downward (inward), until in each case he considered that the lines (horizontal and vertical) were equal in length. It was found that the average differences for the 5 figures between the estimated and actual lengths of the vertical lines were 1.2 mm. (or 15%), 2.7 mm. (or 13.5%), 6.8 mm. (or 13.6%), 8.3 mm. (or 8.3%), and 17.4 mm. (or 8.7%). Another 5 figures consisting also of a vertical and a horizontal line but not in inverted T-shape, whose horizontal lines were also 8 mm., 20 mm., 50

mm., 100 mm., and 200 mm. long were used in a second experiment. The same testing procedure was adopted. It was found that the average differences for the 5 figures between the estimated and actual lengths of the vertical lines were .8 mm. (or 10%), .7 mm. (or 3.5%), 1.6 mm. (or 3.2%), .6 mm. (or .6%), and 2.4 mm. (or 1.2%). Thus the results indicate that the longer the lines (or the larger the figures), the less the illusion. Since illusion is less in the latter than in the former case, it may be inferred that the illusion of an inverted T-shaped figure is not only one of vertical and horizontal lines, but is also due to the peculiar characteristics of the figure itself. Probably the particular figure itself plays even a more important part in the illusion.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1840. Pascal, J. I. Myopia and exophoria. *Arch. Ophthal.*, Chicago, 1935, 14, 624-626.—Referring to Marlow's paper showing that exophoria may produce axial myopia through increased tension of the extra-ocular muscles, Pascal calls attention to the fact that exophoria may cause a "tonic myopia" when association between accommodation and convergence is too inflexible—constant excessive stimulation of the convergence center produces associated excessive accommodation. It is suggested that myopia of this tonic type be relieved by stereoscopic exercises designed to break up the close association between accommodation and convergence.—M. R. Stoll (Massachusetts Eye and Ear Infirmary).

1841. Ranschburg, P. A siketnémák egy csoportjának hallóvá tétele a dr. Bárczi-féle módszerrel. (The restoration of hearing to a group of deaf-mutes by means of Dr. Bárczi's method.) *Mag. Gyógypedag.*, 1935, 57-83.—Symptoms and pathology of the cortical deaf-mutism are reviewed. The affinity is mentioned of cortical deaf-mutism to other developmental retardations and constant functional deficiencies of children, such as legasthenia of normals and oligophrenics, congenital alexia, graphasthenia, orthographasthenia, different sorts of mnemasthenia, dyslalia, and literal, verbal, and phrasal logasthenia. All these are supposed to be produced by imperfect development of certain fields of the cortex, or (2) by insufficient irrigation of structurally well-developed centers with arterial blood. Report is given on a group of deaf and dumb children without ability to hear the loudest noises, musical sounds, or chords, but with the probable elicitable ability to hear single vowels, consonants and especially words after previous development of intelligence by visual-kinesthetic acquisition of articular speech and subsequent revival of hearing by the original method of Bárczi (described by him in *Mag. Gyögypedag.*, 1935, 1-19). Against the denial of the possibility of cortical mutism a series of certified cases from the recent literature are cited. Reports of 6 originally quite deaf and dumb cases examined by the author by the most rigorous psychophysical methods are given, with evidence for great progress in hearing and improvement in the correctness, rhythm, and melody of speaking as taught by Bárczi. The importance and value of this method

for the revival of lost hearing are stressed.—P. Ranschburg (Budapest).

1842. Schole, H. Experimentelle Untersuchungen an höchsten und an kürzesten Tönen. (Experimental investigations of highest and shortest tones.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 309-310.—H. Beaumont (Kentucky).

1843. Stott, L. H. Time-order errors in the discrimination of short tonal durations. *J. exp. Psychol.*, 1935, 18, 741-766.—The purpose of the study was to make an accurate determination of the constant, or time-order errors, which occur in comparing short tonal duration. These errors, as well as the location of the indifference duration, i.e., the duration at which time-order errors disappear, were studied under a variety of conditions, with a total of 524 subjects from whom 99,480 judgments were obtained. With naïve, unpracticed subjects the time-order indifference point for tonal durations was approximately .92 sec. A relative underestimation of the second member of each pair for all durations of .90 and shorter and a relative overestimation of the second for all durations of .96 sec. and longer were shown. The preceding experience of the subject in comparing durations was shown to be an important factor in determining the time-order errors and the indifference duration. For example, the average results from 15 subjects who served throughout a lengthy series of sittings showed an indifference duration between 1.6 and 2.0 sec., or .7 to 1.1 sec. longer than for naive subjects.—H. W. Karn (Pittsburgh).

1844. Vogt, A. Vestibularsprüfungen bei Taubstummen. (Vestibular tests with deaf mutes.) Freiburg: Poppen & Ortmann, 1935. Pp. 14.—R. R. Willoughby (Clark).

1845. Weill, G., & Pfersdorff, C. Les fonctions visuelles de l'aveugle-né opéré. (The visual functions of the congenitally blind who have been operated upon.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 367-382.—An 11-year-old child was operated upon for congenital cataracts. She was able at once to match colors, to recognize objects, especially if allowed to handle them, to recognize colored drawings of objects, and to imitate positions of the arms and body from living models or pictures. She had great difficulty in identifying or copying drawings, and in identifying or copying movements of the fingers. In cases of accidental injuries to the occipital lobes, the patients have automatic optical motor associations which this child never had an opportunity to acquire. The contrast in echopraxia between the hands and fingers is also found in some idiots, imbeciles, and patients with organic brain diseases.—M. B. Mitchell (New Hampshire State Hospital).

1846. Williams, R. D. Interlocking of Weber's law and sensory discrimination data. *J. gen. Psychol.*, 1936, 14, 158-176.—In a mathematical analysis of the relationship between Weber's law and data from discrimination experiments, the following are considered: effect of the rate of change of the stimulus, meaning of the terms "stimulus" and "fixed response,"

and the derivation of a unit of sensation-change.—*H. Schlosberg* (Brown).

1847. Wingfield, R. C. An experimental study of the apparent persistence of auditory sensations. *J. gen. Psychol.*, 1936, 14, 136-157.—Several experiments have indicated that an auditory experience continues for a short time after the cessation of the stimulus. The work of Weinberg and Allen on the critical fusion frequency of interrupted tones is most often mentioned. But when a more efficient device is used for interrupting the tone, "No critical frequency points can ever be reached." With less complete cutoff it is possible to obtain flutter, but only when the conditions are such that the variation in intensity is less than the intensive difference threshold. There is no such thing as auditory persistence. The apparatus employed in this experiment used an elaborate but silent mechanical cutoff placed in front of a phone, and is described in detail.—*H. Schlosberg* (Brown).

1848. Wirth, W. Ein massmethodischer Beitrag zur Ganzheitspsychologie. (A psychometric contribution to totality psychology.) *Neue psychol. Stud.*, 1934, 12, No. 2, 113-134.—An analysis of Urban's curves for judgments of "larger," "indifferent," and "smaller" in the use of the method of constant stimuli.—*K. F. Muensinger* (Colorado).

[See also abstracts 1809, 1810, 1816, 1891, 1924, 1936, 1937, 1943, 1944, 1952, 1954, 1963, 1969, 1970, 1971, 2016, 2060.]

#### FEELING AND EMOTION

1849. Pepper, O. H. P. The handicap of the patients' fears. *J. nerv. ment. Dis.*, 1935, 82, 639-651.—An argument for adequate recognition of the part fear plays in patients' troubles by the hospital personnel and for an attempt to prevent and mitigate these fears.—*C. R. Atwell* (Boston Psychopathic Hospital).

1850. Suttie, I. D. The origins of love and hate. London: Kegan Paul, 1935. Pp. xvi + 276. 10s. 6d.—In this volume Suttie outlines a system of psychology based not on the Freudian libido but on an innate need for companionship, a love which is independent of genital appetite. He criticizes the Freudian hypotheses and theories and points out their insufficiencies, showing that they proceed from Freud's Jewish views as to the importance of the father, whereas it is the mother who is often the parent of greater importance. He discusses the patriarchal and matriarchal types of culture and shows the effects they have on the attitude toward the child and hence on the child's development: the father tends to repress precocity lest he be supplanted, the mother requires no regression with its consequent Cain jealousy. He suggests that equally important with the Oedipus "jealousy" and penis envy are the Cain, the Zeus, and the Laios jealousies. Religion is discussed and a new classification of mental troubles is suggested. Finally psychoanalysis is shown to be a cure by love, using that term in a non-Freudian sense.—*H. Banister* (Cambridge, England).

1851. Wittkower, E. Studies on the influence of emotions on the functions of the organs. *J. ment. Sci.*, 1935, 81, 533-682.—This paper presents the results of several years' work, begun at Berlin and completed at London, on the influence of emotional reactions on organic function. The following topics are discussed: respiration, heart and vessels, salivary secretion, stomach, bile, blood, urination, basal metabolism, endocrine glands, and psychogalvanic reflex. The approach includes a review of the literature; clinical study, illustrated by case protocols; biochemical tests; experimentation, including hypnosis, applied to both normal and neurotic subjects. A classified bibliography of 22 pages is appended.—*C. J. Herrick* (Pennsylvania).

[See also abstracts 1983, 2010, 2245.]

#### ATTENTION, MEMORY AND THOUGHT

1852. Bridge, M. The effect on retention of different methods of revision. *Aust. Coun. educ. Res. Ser.*, 1934, No. 28.—The investigation was made to determine, first, whether a review lesson should be placed immediately after the learning lesson, or at the beginning of the succeeding lesson the next day; second, which of four commonly practiced methods yields the best results. These methods were (1) sentence completion, (2) written answers to a series of problems, (3) "lecturettes" given by children, (4) oral questioning. 963 fifth-grade pupils were the subjects, and were divided into 8 groups of 36 each, equalized as to intelligence, plus a control group (no review lessons). Several forms of objective tests were used to measure the results. Method (2) above was found to be least effective, possibly due to testing methods. The other three were about equal both in the immediate tests and one month later, for control and review groups alike.—*O. N. deWeerd* (Beloit).

1853. Clites, M. S. Certain somatic activities in relation to successful and unsuccessful problem solving. *J. exp. Psychol.*, 1935, 18, 708-724.—"Increase in winking rate accompanies successful problem solving. Such an increase is more commonly present during difficult mental tasks than during easier tasks. Successful problem solving is followed by definite decrease in winking rate, while the decrease in winking rate is not so definite in the case of those who fail. Upon analysis, it is found that there is not a reliable difference in the rate of winking during problem solving for successful and failing subjects. The real difference is found when the winking rate during rest is compared with the rate during mental effort." It is inferred that (1) problem solving of the type investigated is accompanied by an increase in somatic activity, or (2) problem solving is in whole or in part a type of somatic activity. Subsequent articles will deal with other somatic activities.—*H. W. Karn* (Pittsburgh).

1854. Dulsky, S. G. The effect of a change of background on recall and relearning. *J. exp. Psychol.*, 1935, 18, 725-740.—The material to be learned consisted of nonsense syllables which were to be memorized by the paired-associates method. Changes

in background were secured by means of variations in chroma and differences in brightness. The following conclusions are inferred from the results: (1) When materials become associated with the environment during learning, any change of that environment is likely to prove detrimental to recall. The degree of effect will presumably vary with the number and strength of the connections and the extent to which the environment is altered. All degrees of effect may be secured. (2) When no such associations are present, the introduction of new environmental conditions may distract the subject and interfere with recall. The degree of interference will presumably vary with the degree and character of the change and the subject's susceptibility to it. (3) There is no need to assume that every environmental change will be detrimental. Some changes may be too slight to produce an effect. The experiments prove that the environmental conditions are factors involved in recall, and any experiments yielding negative results do not disprove the principle.—*H. W. Karn* (Pittsburgh).

1855. Dwelshauvers, G. *Recherches expérimentales sur l'imagination créatrice.* (Experimental research on creative imagination.) *J. Psychol. norm. path.*, 1935, 32, 435-442.—The term "creative imagination" is used in this study to designate the complex processes of invention, and the author warns against confusing it with the concept of a mental faculty. The experimental material consisted in incomplete drawings which the subjects were asked to finish. Some of these incomplete drawings were meaningless but some were supposed to suggest meaning. The author concludes that (1) cases of absence of imaginative invention are very rare, (2) the subjects of the finished drawings are varied despite the experimental suggestions, (3) suggestibility diminishes with age, (4) drawing ability does not seem to be correlated with creative imagination, (5) there seems, however, to be some correlation between drawing ability and inventive intuition, (6) imaginative invention is more often reasoned than intuitive. A repetition of part of the experiment at a later date showed that (1) recall depends in part on the substitution of concepts for sense images, (2) the meaning suggested in the first presentation aids memory, (3) certain physiological factors such as position in the visual field are important for memory.—*R. E. Perl* (Columbia).

1856. Forissier, J. *Le calcul mental rapide à la portée de tout le monde. Ses principes. Ses applications. Résolution des opérations numériques. Problèmes du calendrier.* (Rapid mental calculation within the reach of everyone: principles, applications, the solution of numerical operations, and problems pertaining to the calendar.) Paris: Albin Michel, 1932. Pp. 191. 20 fr.—*R. R. Willoughby* (Clark).

1857. Hsiao, H. H. [A comparative study of the effects of "grouping" and "scattering" upon learning.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 1, No. 2. Pp. 7.—Two experiments were performed to determine the relative effect of "grouping" and

"scattering" upon learning. In experiment I, two lists of 20 word-pairs each were used as material. For every 5 words, there is 1 common pair-word. However, list A was arranged in grouping form, list B in scattering form. Two groups of 6 persons each were tested, and the order of presentation of the lists was varied, so as to avoid any possible practice effect or general adaptation. Each word-pair was exposed by a tachistoscope for 2 secs. At the end of the 3rd presentation the subjects were required to write out the words already learned on a test paper. The results showed that the scores of the grouping arrangement were superior to those of the scattering arrangement. In order to ascertain the possible effect of difficulty or ease of arrangement of the two paired word lists, experiment II was performed, in which two more groups of 6 persons each were tested. The same material was used, but this time the word-pairs which had been arranged in grouping form were presented in scattering form, and vice versa. The results also pointed to the superiority of the "grouping" arrangement. When the two groups of subjects used in the first experiment were retested in the second experiment, it was found that the group differences became less marked than before, probably due to the difference of learning method in the first experiment. If such were the case, it might be inferred that presentation by grouping was not only beneficial to learning but also helped retention. Under these conditions, the beneficial effects of the grouping presentation in the second experiment must have been partly masked by those of the grouping presentation in the first experiment. The former belongs to the grouping material of the second experiment, while the latter belongs to the scattering material of the first experiment. Hence the group difference found is the resultant of two opposing effects. The author also infers that if there were interference the effect must be less in grouping learning.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1858. Jones, L. W. *Memory for faces and memory for names.* *Character & Pers.*, 1935, 4, 115-119.—The author discusses briefly the value of a good memory for names and faces from theoretical and applied standpoints. He gives the results of three or four observations made on his own memory and that of others for names and faces of people met many years previously.—*M. O. Wilson* (Oklahoma).

1859. Leible, O. *Zur Psychologie der Aussage.* (The psychology of testimony.) *Krim. Mh.*, 1935, 9, 273-276.—Leible has used the following procedure in a policemen's school to demonstrate the unreliability of testimony. Two actors burst into the class and stage a homicidal attack, lasting 6 seconds and carried out exactly according to a written plan. The students considered the affair serious and reacted quickly and logically. Immediately afterward they wrote a description to which they were willing to swear. Not a single witness gave a wholly true, even though fragmentary account. Five days later a questionnaire demonstrated even less accuracy. Leible's conclusions are that a witness gives as a

perception what is actually a conclusion drawn from other perceptions, and cannot distinguish between the two. Exact observation is impossible in rapidly occurring events, especially of a terrifying nature. Only the grossest parts are perceived and remembered. Concentration on one point blinds the observer to others equally obvious. Spoken words are often not heard, or if they are, they cannot be reproduced, although their meaning is correctly interpreted. Only the main outlines of an event can be reconstructed even from the greatest possible number of witnesses. If a witness gives his testimony conscientiously, it is useless to try to change it. Improvement would be attainable only by a more expert examination.—*M. E. Morse* (Baltimore).

1860. Noll, V. H. Measuring the scientific attitude. *J. abnorm. soc. Psychol.*, 1935, 30, 145-154.—The scientific attitude as analyzed and described includes the following habits of thinking: habit of accuracy in all operations, including accuracy in calculation, observation and report; habit of intellectual honesty; habit of open-mindedness; habit of suspended judgment; habit of looking for true cause-and-effect relationships; and habit of criticalness, including that of self-criticism. An example of the types of items devised to measure the functioning of each of the six habits is one of several used for accuracy: a simple diagram of the orbits of the earth and Mars around the sun was presented with a dozen questions which could be answered by reference to the diagram. Results showed that older children make higher scores, and the greater the interval between the school grades being compared the more reliable the differences between their respective mean scores.—*C. H. Johnson* (Boston Psychopathic Hospital).

1861. Oehl, W. Psychologische Untersuchungen über Zahldenken und Rechnen bei Schulanfängern. (Psychological studies of numeration and calculating in school beginners.) *Z. angew. Psychol.*, 1935, 49, 305-351.—Calculating depends wholly upon the development of a clear notion of the number series. Here it means setting up relations between certain numbers. This is accomplished by movement in the series, and the direction of movement is crucial. Addition predominates at first, and the child thinks of the relation between two numbers as two different relations, depending on direction. The two must be identified before subtraction can become the reverse of addition. The general development is that of a subjectively organized number series.—*H. D. Spoerl* (Northeastern).

1862. Straub, W. Leitlinien einer Psychologie der Willensbildung. (Outline of a psychology of the development of will power.) *Ber. Kongr. disch. Ges. Psychol.*, Tübingen, 1935, 14, 281-283.—*H. Beaumont* (Kentucky).

1863. Stroop, J. R. Studies of interference in serial verbal reactions. *J. exp. Psychol.*, 1935, 18, 643-662.—In this study pairs of conflicting stimuli, both being inherent aspects of the same symbols, were presented simultaneously (a name of one color printed in the ink of another color—a word stimulus

and a color stimulus). The difference in time for reading the words printed in colors and the same words printed in black is the measure of the interference of color stimuli upon reading words. The difference in the time for naming the colors in which the words are printed and the same colors printed in squares (or swastikas) is the measure of the interference of conflicting word stimuli upon naming colors. The interference of conflicting color stimuli upon the time for reading 100 words (each word naming a color unlike the ink-color of its print) caused an increase of 2.3 seconds or 5.6% over the normal time for reading the same words printed in black. This increase is not reliable. But the interference of conflicting word stimuli upon the time for naming 100 colors (each color being the print of a word which names another color) caused an increase of 47.0 seconds or 74.3% of the normal time for naming colors printed in squares. Tests on the permanency of the interference of conflicting word stimuli are also described.—*H. W. Karn* (Pittsburgh).

1864. Zawadzki, B. O roli abstrakcji i układów społecznych w myśleniu. (On the role of abstraction and Gestalt factors in thinking.) *Kwart. psychol.*, 1935, 7, 589-612.—The thesis of the Gestalt psychologist that "productive abstraction" consists in the transfiguration of the phenomenal field analogous to the changing of ambiguous figures is tested by the results of some experiments in thinking. A qualitative analysis of the introspective data discloses that this phenomenon as described by the Gestalt psychologist is neither a sufficient nor a necessary condition of "productive abstraction." This negative result is followed by some theoretical remarks demonstrating the bearing of these findings on the problem of "insight."—*T. M. Abel* (Progressive Education Association).

[See also abstracts 1921, 1985, 2043, 2148.]

#### NERVOUS SYSTEM

1865. Alcalde, W. Potenciales de acción en el sistema simpático. (Action potentials in the sympathetic system.) *Arch. Neurobiol.*, 1935, 15, 35-60.—Methods of detecting and measuring bioelectric phenomena are traced historically from the early capillary electrometer of Einthoven to the refined techniques of English and American electrophysiologists. Variations of the sympathetic tonal discharges are fewer in number and greater in amplitude and duration than is the case in the motor nerves that maintain motor contraction. Three types of potentials (A, 80 to 30 meters per second; B, 14 to 10; and C, 1 to .7) are recognized in warm blooded animals. It is demonstrated that the functions of nerve fibers (velocity, wave of excitation, refractory period) are different in myelinated and unmyelinated fibers. The existence of reflex activity in the sympathetic system appears doubtful. These are described as pseudo-axonic reflexes. A bibliography of 124 titles is frequently cited.—*R. M. Bellows* (U. S. E. S. Div. Standards and Research).

1866. Bishop, G. H. The action potentials at normal and depressed regions of non-myelinated fibers, with special reference to the "monophasic" lead. *J. cell. comp. Physiol.*, 1934, 5, 151-169.—(Biol. Abstr. IX: 15879).

1867. Bishop, G. H., & Heinbecker, P. The afferent functions of non-myelinated or C fibers. *Amer. J. Physiol.*, 1935, 114, 179-193.—A previous study by these authors reported that under ether, with pressure block eliminating all but the C fibers, no reflex effect indicating sensory function was obtainable. Clark, Hughes and Gasser, on the other hand, reported obtaining such an effect with diazepam anesthesia. In the present study, therefore, the authors repeated the study using both anesthetics, and using an alternating current block which was more completely differential for myelinated and non-myelinated fibers than pressure block. Both findings were corroborated, ether apparently depressing the non-myelinated and diazepam the myelinated fibers. There was also a definite response to C stimulation under nitrous oxide. Respiration, blood pressure and dilatation showed similar effects from B and C stimulation, but there was a characteristic difference in skeletal muscular response suggesting two different mechanisms. The reflex response to stimulation of non-myelinated fiber in the saphenous nerve, the nerve to the medial head of the gastrocnemius, the sympathetic trunk and the vagus is held to be similar with respect to respiration, blood pressure, dilatation and muscular responses. Such stimulation is "undoubtedly capable of producing pain in all these nerves."—T. W. Forbes (N. Y. Psychiatric Institute).

1868. Bishop, G. H., & Heinbecker, P. The afferent functions of non-myelinated or C fibers. *Amer. J. Physiol.*, 1935, 114, 212-223.—The inotropic depression (force of beat) of the heart and chronotropic depression (rate) were studied by stimulation of the vagus and observation of the effect of nicotine. Differences in the loss and recovery of the two effects yielded evidence for separable nervous mechanisms. The mechanisms apparently did not follow the myelinated vs. non-myelinated division. The results are interpreted as indicating an intrinsic nervous mechanism in the pacemaker in the turtle.—T. W. Forbes (N. Y. Psychiatric Institute).

1869. Bunting, H., Meek, W. J., & Maaske, C. A. The chemical transmission of vagal effects to the small intestine. *Amer. J. Physiol.*, 1935, 114, 100-105.—An acetylcholine-like substance was demonstrated in the splanchnic area from vagal stimulation. The apparent source was the small intestine. Another example of chemical transmission of peripheral parasympathetic effects was therefore demonstrated.—T. W. Forbes (N. Y. Psychiatric Institute).

1870. Choroschko, W. K. Doctrine des lobes frontaux d'après trente années de recherches personnelles. (Doctrine of the frontal lobes after thirty years of personal research.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 383-401.—The author believes that there are no "silent" areas in the brain, but only some whose significance we have been unable to determine.

After 30 years of work, including a review of literature, animal experimentation, work on man during war and peace with tumors and injuries in the frontal lobes, the author believes that the frontal lobes do play an important part in the psychical life of the individual. Lesions in the frontal lobes do not cause the sensory and motor disturbances found when other areas are injured. The disturbances are more those of initiative, spontaneity, and autism. There is a profound disturbance of active attention, considerable impairment of memory and observation, and comparatively less disturbance of comprehension. Several symptoms have been observed: (1) modification of the diameter and reaction of the pupils, (2) paradoxical manifestation of reflexes, (3) disturbance of the vegetative nervous system, including organic sensation, nutrition, and respiration, (4) disorientation in time, and (5) disturbance in the emotional functions and in the expressive movements.—M. B. Mitchell (New Hampshire State Hospital).

1871. Clark, D., Hughes, J., & Gasser, H. S. Afferent function in the group of nerve fibers of slowest conduction velocity. *Amer. J. Physiol.*, 1935, 114, 69-76.—The saphenous nerve of cats was stimulated at a strength such as to activate A and B fibers only and the effect compared with the stimulation at a strength capable of producing A, B and C elevations in the electroneurogram. Shocks were given at 2 to 4 per second. An effect was produced on respiration only when the C elevation occurred in the electroneurogram. An effect on blood pressure and respiration was obtained after pressure block of all but the C fibers, although the effect was somewhat smaller than with all fibers conducting. A similar result was obtained by asphyxiation by means of a cuff around the leg. It is therefore concluded that C fibers carry afferent impulses capable of producing the reflex. The time necessary for an elimination of the A and B fibers corresponded to that in a previous human experiment for the loss of touch, pressure, vibration and position sensations. The remaining sensations of warmth and burning pain are therefore probably conveyed by C fibers.—T. W. Forbes (N. Y. Psychiatric Institute).

1872. Danilewsky, B., & Worobjew, A. Ueber die Fernwirkung elektrischer Hochfrequenzströme auf die Nerven. (The distant effect of electrical high frequency currents on nerve.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 440-452.—When diathermy electrodes are placed at distances of 50 to 200 cm. from a nerve-muscle preparation, the excitability of the nerve is greatly enhanced. After the current is turned off, the nerve immediately returns to its normal level of excitability. Grounding the preparation makes the increased excitability more pronounced. Under the influence of high frequency currents, reflex movements in the frog are practically unaffected.—M. A. Rubin (Clark).

1873. Ebbecke, U., & Schaefer, H. Ueber den Einfluss hoher Drucke auf den Aktionsstrom von Muskeln und Nerven. (The influence of high pressures on the action current of muscle and nerve.)

*Pflüg. Arch. ges. Physiol.*, 1935, 236, 678-693.—High pressures (above 300 atmospheres) cause lowering of the action potential spike, a spreading out of the wave, decrease in conduction speed, increase in excitability of the nerve, increase in the height of the after-potential, and a rhythmic discharge to a single stimulus. Muscle action currents were decreased and spread out, even at lower pressures.—*M. A. Rubin* (Clark).

1874. Eccles, J. C. Actions of antidromic impulses on ganglion cells. *J. Physiol.*, 1935, 85, 32-34P.—*M. A. Rubin* (Clark).

1875. Eccles, J. C. Slow potential waves in the superior cervical ganglion. *J. Physiol.*, 1935, 85, 464-502.—*M. A. Rubin* (Clark).

1876. Gammon, G. D., & Bronk, D. W. The discharge of impulses from Pacinian corpuscles in the mesentery and its relation to vascular changes. *Amer. J. Physiol.*, 1935, 114, 77-84.—A record was made from the splanchnic nerve in the abdomen or the thorax with both blood pressure changes and distention of the mesenteric vessels. Reduction and elimination of the responses were obtained by severing the nerve supply to one Pacinian corpuscle after another, thereby identifying them as sources. No other sources in the region were found. Increased blood pressure from adrenalin produced a decreased nervous discharge and a decreased blood pressure produced no marked effect, whereas distention of the mesenteric vessels produced a Pacinian discharge. It is concluded that the Pacinian corpuscles are sensory endings for recording the state of the mesenteric vasculature.—*T. W. Forbes* (N. Y. Psychiatric Institute).

1877. Hesdorffer, M. B., & Scammon, R. E. Growth of the human nervous system. I. Growth of the cerebral surface. *Proc. Soc. exp. Biol., N. Y.*, 1935, 33, 415-418.—Cerebral surface is measured by sectioning formalin-fixed brains enclosed in a matrix into slices 2 to 3.5 mm. in thickness. The outline of each section is measured with a chartometer and this value multiplied by the thickness of the section. The sum of these values is taken to represent the surface of the cerebrum. 20 cerebri, including samples from the fourth fetal month to two postnatal years and maturity, were studied. Results suggest that the interval from 6 lunar months to some point in the second postnatal year is a period of rapid absolute increase, with a peak of greatest growth in the last trimester of fetal life.—*H. Peak* (Randolph-Macon).

1878. Hoagland, H. Temperature characteristics of the "Berger rhythm" in man. *Science*, 1936, 83, 84-85.—"It is reasonable to suppose that the Berger rhythm may be due to relaxation oscillations resulting from continuous, non-rhythmic metabolic events going on in the cortical cells. The frequency of the rhythm, therefore, might be expected to be directly proportional to the speed of these local metabolic events." To test this hypothesis an examination was made of the Berger rhythm as a function of temperature in subjects who were given hyperpyrexia treatments. The temperature in most cases was elevated

to 105°. Six psychotic patients were studied. The adequacy of the Arrhenius equation to describe the data suggests that frequency of the rhythm may be a direct measure of the velocity of determinative chemical events.—*R. Goldman* (Clark).

1879. Hummon, I. F., & Boyd, T. E. Changes in electrical resistance of nerve during block by cold and by heat. *Amer. J. Physiol.*, 1935, 114, 85-89.—A previous report by another investigator that a rise of electric resistance accompanies failure of a nervous impulse was not corroborated. The sciatic-gastrocnemius preparation with 1000- to 2000-cycle bridge was used. A markedly increased resistance was obtained when cooling of the nerve resulted in ice formation, but it was found possible to obtain both cold block (non-freezing) and heat block of the nerve without a break in the resistance curve.—*T. W. Forbes* (N. Y. Psychiatric Institute).

1880. Jasper, H. H., & Andrews, H. L. Human brain rhythms; I. Recording techniques and preliminary results. *J. gen. Psychol.*, 1936, 14, 98-126.—With appropriate electrodes and amplifiers it is possible to record rhythmic brain potentials from the scalp, even when the electrodes are only 5 mm. apart. With proper electrode placement the electroencephalogram from a fairly restricted brain region can be differentiated from that of another adequately separated region. The alpha rhythm (about 10 per second) can usually be recorded from the occiput, while the beta rhythm (about 25 per second, and smaller in amplitude) shows most clearly over the central fissure. The two rhythms behave differently in response to stimulation. The apparatus is described in detail and the relationship between the electrode placement and the source of the disturbance is discussed.—*H. Schlosberg* (Brown).

1881. Lane, R. F., & Lewy, F. H. Blood and chronaximetric examination of lead workers subjected to different degrees of exposure: a comparative study. *J. industr. Hyg.*, 1935, 17, 79-92.—A comparison of measures of granulation in the red corpuscles with chronaxy in lead workers. The former measurement detects brief exposures to lead, whereas the chronaxy is better for detecting a long-continued exposure.—*H. E. Burtt* (Ohio State).

1882. Lazarev, P. P. O znachenii izmenenii chuvstvitel'nosti golovnogo mozga dlia organizma pri beremennosti. (Changes in the sensitivity of the brain and their significance for the organism in pregnancy.) *Klin. Med., Mosk.*, 1933, 11, 1-7.—(*Biol. Abstr.* IX: 15909).

1883. Lewy, F. H. The application of chronaximetric measurement to industrial hygiene, particularly to the examination of lead workers. *J. industr. Hyg.*, 1935, 17, 73-78.—The extensors of the fingers are most responsive to lead poisoning as affecting chronaxy. The author uses an index based on one of the terms in the equation of a hyperbola.—*H. E. Burtt* (Ohio State).

1884. Narikashvili, I. K voprosu o simpaticheskoi innervatsii skeletnoi muskulaturi. (The question of

sympathetic innervation of skeletal muscle.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 247.—L. A. Riggs (Clark).

1885. Ngowyang, G. Die Cytoarchitektonik des menschlichen Stirnhirns: I. Teil, Cytoarchitektonische Felderung des Regio granularis und Regio dysgranularis. (The cytoarchitectonics of the human forebrain: Part I, Cytoarchitectonic differentiation of the regio granularis and regio dysgranularis.) *Monogr. nat. Res. Inst. Psychol., Shanghai*, 1934, Ser. No. 7. Pp. 68.—The author found cytoarchitectonically in the frontal lobe of a human brain four well-delimited divisions, as O. Vogt had found myeloarchitectonically; these were, however, not in agreement with Economo's classification. This monograph (see VIII: 5838) is concerned with a description of the isocortex frontalis, which may be divided into four regions: (1) regio frontalis agranularis, whose IVth layer is not distinct, contains no or very few granular cells, to which belong areas 36 to 40 inclusive, and areas 42 and 43; (2) regio frontalis dysgranularis, whose IVth layer is somewhat distinct, contains few granular but many small pyramidal cells, to which belong areas 41, 44, 44a, 45, 47, 48, 48a, 55 and 56; (3) regio frontalis paralimbica contains long and large spindle cells, to which belong areas 3, 33, 34, 35, and 36a; (4) regio frontalis granularis, whose IVth layer is very distinct, contains many granular cells, to which belong all areas except those above mentioned and the area praetrigonalis parvocellularis. The author also points out that the cell size in the different layers of the human frontal lobe is inversely proportional to its cell count. The thickness of the cortex is also inversely proportional to the number of cells. In other words, the thicker the cortex, the larger but fewer the cells. However, there are exceptional cases where the cortex is rather thin but contains cells of considerable size.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1886. Nolf, P. Les nerfs extrinsèques de l'intestin chez l'oiseau. I. Les nerfs vagus. II. Les nerfs coeliaques et mésentériques. III. Le nerf de Remak. (The extrinsic nerves in the intestines of birds. I. The vagus nerves. II. The celiac and mesenteric nerves. III. Remak's nerve.) *Arch. int. Physiol.*, 1934, 39, 113-256.—Faradic stimulation applied at the peripheral end of the vagi under the diaphragm produces over the entire small intestine motor reactions which consist essentially in a prolonged reinforcement of intestinal automatism. The effects of stimulation of the celiac nerves are comparable to those of stimulation of the vagi, being in both cases an extension to the two parts of the duodenum of acceleration and reinforcement given to the rhythm of the gizzard. Stimulated at its posterior (cloacal) extremity, Remak's nerve produces a reaction not only on the rectum, but along the ileum, excitatory in its upper and median portions, and first inhibitory, then excitatory in its lower portion.—(Biol. Abstr. IX: 15919).

1887. Sánchez y Sánchez, D. La histolysis del sistema nervioso en la cola del renacuajo durante la metamorfosis. (The histolysis of the nervous system

in the tail of the frog during metamorphosis.) *Arch. Neurobiol.*, 1935, 15, 153-178.—15 plates show various stages of degeneration of different portions of the caudal nervous system of *Rana esculenta* L.—R. M. Bellows (U. S. E. S. Div. Standards and Research).

1888. Scammon, R. E., & Hesdorffer, M. B. Growth of the human nervous system. II. Indices of relation of cerebral volume to surface in developmental period. *Proc. Soc. exp. Biol., N. Y.*, 1935, 33, 418-421.—The volumes of 20 brains ranging from the fourth lunar month to the fifth decade were measured by the displacement method. Six indices of the relation of cerebral volume to surface are reported: "total" surface area: volume, total "free" surface: volume, "total" surface: volume, "free" surface: volume, "total" surface: calculated surface of sphere, "free" surface: calculated surface of sphere.—H. Peak (Randolph-Macon).

1889. Schaffer, K. Tehetség, agyvelő, lángész. (Talent, brain, genius.) *Mag. Széle*, 1934, 12. Pp. 5. I. Biology of human talent. Positive and negative extreme variants. Normal or orthophrenic and hyperphrenic individuals as biopositive, hypo- or oligophrenic as bionegative. II. Relation of human faculties to the brain. Progressive cerebration (Economo) and progressive decerebration (v. Miskolczy). Four studies of not only macroscopic but also histological structure analysis of the brain of talented persons by Schaffer and his students Somogyi and v. Sántha. Medium talents are the results of extraordinary evolution of the surface, geniuses of the development of special structure in certain regions of the brain. III. The biopositive degrees of talent. Genius is not a psychiatric problem. Without geniuses, there would be no evolution of mankind.—P. Ranschburg (Budapest).

1890. Weiss, P. Homologous (resonance-like) function in supernumerary fingers in a human case. *Proc. Soc. exp. Biol., N. Y.*, 1935, 33, 425-430.—The author has examined a case of supernumerary fingers reported by Halverson and Amatruada in order to test the principle of "resonance" in the human nervous system. The individual showed congenital duplication of the left forearm and hand, the radial portion being absent and its place taken by the mirror image of the normal ulnar part. It was found that supernumerary identical muscles responded whenever an impulse specific for that muscle was set up, so that when the individual tapped with the third normal finger, all other fingers being quiet, the supernumerary third invariably accompanied with a tapping movement. This is said to reveal the validity of homologous function. The individual identified the supernumerary fingers by pointing to the corresponding fingers on the right hand. The author suggests that this demonstrates that "proprioceptive sensations are . . . identified by some specificity of the discharges of the sensory organs . . . rather than by local signs."—H. Peak (Randolph-Macon).

1891. Wittmaack, K. Über sekundäre Degeneration im Cochlearnerven und über die funktionelle und biologische Beziehung zwischen Cortischen

**Organ und Hörnerven.** (Secondary degeneration in the cochlear nerve and the functional and biological relations between the cortical organ and the auditory nerve.) *Acta oto-laryng., Stockh.*, 1935, 23, 274-289.—When the circulatory system was not damaged, cutting the auditory nerve did not cause degeneration in the organ of Corti. Furthermore, degeneration in the organ of Corti was sometimes found when the auditory nerve was intact.—*M. B. Mitchell* (New Hampshire State Hospital).

[See also abstracts 1829, 1830, 1835, 1841, 1900, 1904, 1907, 1944, 1948, 1950, 1957, 1960, 1970.]

#### MOTOR PHENOMENA AND ACTION.

1892. **Arkhangelski, V. M.** Pro umovni refleksi v kastrata (sabaki) u dovgii chas pisly kastratsii. (Conditioned reflexes in a castrated dog during a long period following castration.) *Méd. exp., Kharkov*, 1935, No. 7-8, 33-44.—Observations of conditioned-reflex activity in a dog during six years following castration indicate that the effects of castration are most pronounced during the first two to three years after the operation; that old conditioned reflexes, coarse discriminations and conditioned inhibitions are retained after five years; that the period is characterized by the inconstant value of the conditioned reflexes—testifying to instability of excitatory and inhibitory processes; that new reflexes are formed with greater difficulty immediately after castration than six years later, but that the strength of these reflexes oscillates within wide limits. The stabilization and equalization observed only some time after castration is taken to show that the alterations of cortical activity depend not only upon the absence of the sexual hormones but also upon inter-glandular disturbance due to the influence of castration.—*F. S. Keller* (Colgate).

1893. **Balakschina, W. L.** Über den Mechanismus der bedingt-reflektorischen Regulierung der Nierenfunktionen. (On the mechanism of the regulation of kidney functions by means of conditioned reflexes.) *Rep. int. physiol. Congr., Moscow*, 1935, 19-20.—After separation of the hypophysis from the higher regions by placing a half ring of glass on the infundibulum, it is observed (in dogs) that conditioned reflexes of the first and second orders are preserved only in the kidney with intact nerve supply. New conditioned responses are established only in the intact kidney, requiring only about 25% of the normal number of trials. The denervated kidney remains normal in its ordinary functions, but does not respond to exteroceptive stimulation. It is concluded that the hypophysis is an intermediary agent in the neurohumoral path between cortex and kidney. Blocking of the hypophysis interferes with conditioning of the denervated kidney, but greatly facilitates conditioning of the intact kidney.—*D. P. Boder* (Lewis Institute).

1894. **Bashmakov, V. J., Vereshchagin, N. K., Zarkh, M. N., Tiunina, V. N., & Belova, T. I.** A comparative investigation of certain physiological reactions in man in prolonged work of fixed amount. *Rep.*

*int. physiol. Congr., Moscow*, 1935, 22-23.—A large complex of physiological variables was investigated in connection with a seven-hour work day, or 150,000 kg.-hrs. of work. Findings toward the end of the day: lung ventilation rises slightly at the amount of work indicated, but increases considerably with double that amount. Cardiovascular reaction depends greatly on training. Rheobase and chronaxy increase. There is no increase of diuresis at the amount of work indicated; work of medium heaviness increases, of great heaviness decreases diuresis. The hourly quantity of titratable acid rises gradually. Ammonia rises at a medium and decreases at a heavy load. Urea increases with work. Heavy work depresses mitogenic radiation of urine.—*D. P. Boder* (Lewis Institute).

1895. **Bauer, E. S.** Molekulstruktur und strukturelle Energie bei äusserer Arbeit. (Molecular structure and structural energy in overt work.) *Rep. int. physiol. Congr., Moscow*, 1935.—From experimentation with muscle at work and rest the author infers that structural energy is the direct source of muscular work. This energy is liberated upon stimulation, which disturbs the process of assimilation, maintaining in the muscle a condition of molecular deformation, and while this persists the structural energy is available for work.—*D. P. Boder* (Lewis Institute).

1896. **Braunshausen, N.** L'étude expérimentale de la volonté. (An experimental study of the will.) *Arch. belges Sci. Educ.*, 1935, 1, 102-126.—Seven adults performed a series of acts such as choosing among ten numbers spread before them, pressing upon a dynamometer as often as they wished, or saying what decision they would have made in given cases. After each operation the subjects noted the motives which had influenced them. The result was that for moral as for indifferent decisions there was always an internal or external fact which brought forth the decision. In the great majority of cases there is a motive which determines voluntary choice, a motive which is generally the strongest one at the moment of decision. With Lindworsky, the author believes that the teacher's task is to set forth the real value of the motives which lead one in one direction or another.—*R. Nihard* (Liège).

1897. **Bruman, F., Goldman, H., & Jenny, F.** Untersuchungen zum Studium des trainiertseins VI. Mitteilung. Die Atmung der trainierten Muskulatur. (Investigation of training. 6th contribution. Respiration of the trained muscles.) *Arbeitsphysiol.*, 1935, 8, 453-454.—There is no significant difference between the respiration of the exercised muscles and those of the other (control) paw in the rabbit.—*H. E. Burtt* (Ohio State).

1898. **Csinady, E. v.** Die Analyse der Arbeitsleistung und Ermudung menschlicher Muskelgruppen mit Hilfe eines neuen ergographischen Gerätes. (Analysis of work and fatigue of human muscle group with the aid of a new ergographic device.) *Arbeitsphysiol.*, 1934, 8, 43-61.—An ergograph in which the subject turns the wheel and the motion is reduced

by appropriate gears so that it traces a sinusoidal path on a moving tape.—*H. E. Burtt* (Ohio State).

1899. Csinady, E. v., & Veress, E. v. Ueber den Synergismus der Muskeln; untersucht mit dem Ergometrograph, unter gesonderer Berücksichtigung des zeitlichen Ablaufes. (Synergy of muscles, investigated with an ergometrograph, with special reference to the temporal course.) *Arbeitsphysiol.*, 1934, 8, 62-71.—Study of the different muscle groups when turning the wheel on an ergograph with reference to the intensity of the work and the amount of fatigue.—*H. E. Burtt* (Ohio State).

1900. Du Buy, G. H. The electrical phenomena of the crustacean nerve-muscle system. *Amer. J. Physiol.*, 1935, 114, 224-234.—The electrical responses from the muscles of the claws of several crustaceans, which have some of the characteristics of both striated and smooth muscle, were recorded. The responses indicated that the equilibrium between inhibitory and excitatory processes can be changed in either direction by separate nervous action. It is felt that Wiersma's two types of action potentials are not a necessary postulation and that they can be explained by summation in the mechanical record. It is concluded that there is no evidence for two contractile systems in the same muscle.—*T. W. Forbes* (N. Y. Psychiatric Institute).

1901. Düker, H. Ueber eine Methode zur systematischen Ausbildung der Willenstätigkeit bei willensdefekten Schülern. (A method for developing will power systematically in pupils with defective volition.) *Ber. Kongr. disch. Ges. Psychol.*, Tübingen, 1935, 14, 284-285.—*H. Beaumont* (Kentucky).

1902. Eaton, M. L. A study of latent learning. *J. exp. Psychol.*, 1935, 18, 683-707.—To investigate the latent learning (learning which does not show objectively until there is practice with some kind of reward) resulting from practice in drawing circles without knowledge of results, and to measure the objective learning (improvement in performance which results directly from practice without knowledge and which may be measured without consideration of latent learning) resulting from such practice, two groups of eight subjects each, of equal ability, were tested on a rotameter. The experimental group was given 1000 trials without knowledge of results and 200 trials with knowledge of results. The control group was given only 200 trials with knowledge of results. Main findings are as follows: (1) No latent learning was accumulated during the 1000 trials without knowledge of results. (2) Efficiency was increased 39.1% during 1000 practice trials in drawing circles without knowledge of results. (3) A few practice trials with knowledge of results produce greater efficiency in performance than do many trials without knowledge. (4) Increased efficiency developed through practice without knowledge of results is in part a permanent gain that is not overcome by the group that did not have the 1000 practice trials without knowledge.—*H. W. Karn* (Pittsburgh).

1903. Feng, T. P. The response of muscle to prolonged electric current. *Proc. physiol. Sect. gen.*

*Conf. Chin. med. Ass.*, 1935, 7-8.—Abstract.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1904. Feng, T. P. Effect of frequency of stimulation on tension response of muscle. *Proc. Soc. exp. Biol.*, N. Y., 1935, 33, 330-332.—Toad or frog sartorius stimulated by repetitive condenser discharges through electrodes lying on the tibial half of the muscle showed recurrent minima and maxima. With a tetanizing current of .44 sec. duration, minima appeared at frequencies of 380, 750, and 1500 per sec. This behavior of the tetanized muscle is shown to depend on participation of nerve, and is absent in curarized muscle. Explanation is offered in terms of Wedensky inhibition, assuming (1) that the neuromuscular function has the property of a narcotized region with longer refractory period than nerve, and (2) that there is progressive failure of excitation in intramuscular nerve twigs when frequency of stimulation is increased beyond the maximum.—*H. Peak* (Randolph-Macon).

1905. Fischer, G. H. Grundformen des Ausdrucks und der Sozialhaltung. (Basic forms of expression and of social attitude.) *Ber. Kongr. disch. Ges. Psychol.*, Tübingen, 1935, 14, 124-127.—*H. Beaumont* (Kentucky).

1906. Floyd, W. F. Electrical phenomena recorded from the skin. *J. Physiol.*, 1935, 85, 27-28P.—The author claims that his measurements are more truly representative of the natural activity of the subject than the "psycho-galvanic reflex" or the Tarchanov phenomenon, because the current through the subject is maintained at a constant value for the duration of the experiment (e.g., the current does not vary during the subject's reaction to the stimulus).—*M. A. Rubin* (Clark).

1907. Gedevani, D. Vliyanie simpaticheskoi nervnoi sistemi na utomlenie mishtsi v usloviyakh krovoobrascheniya. (The influence of the sympathetic system upon the curve of fatigue in skeletal muscle having an intact blood supply.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 245-246.—*L. A. Riggs* (Clark).

1908. Gibson, J. J., & Hudson, L. Bilateral transfer of the conditioned knee-jerk. *J. exp. Psychol.*, 1935, 18, 774-783.—The experiment was performed in order to follow up an earlier demonstration which showed that the conditioned withdrawal response of one hand to an electric shock transferred to the other hand, even though the second hand had not been given training. The subject was told to put his attention upon reacting as quickly as possible to the stimulus of a combined light and buzzer by pressing a grip key which he held in his hand on the side to be trained. 0.28 sec. after the beginning of the stimulus a blow was delivered to the patellar tendon. Thus the component events of a voluntary reaction, serving incidentally to facilitate the reflex, were employed as the conditioned "stimulus." In some subjects the knee-jerk was conditioned rapidly and with stability and the conditioning which occurred was equally effective in either leg, suggesting that what was learned was not an isolated response but something similar to a habit or skill. In an additional

experiment it was found that the original conditioned stimulus-complex could be changed considerably without completely destroying its effectiveness.—*H. W. Karn* (Pittsburgh).

1909. Goldberg, A. P., Lepskaja, M. W., & Michlin, M. S. Zur Physiologie und Pathologie der Ermüdung. VIII Mitteilung. Kleine Arbeitsleistungen beim Feilen, ihr Einfluss auf den Stoffwechsel und ihr Zusammenhang mit dem Productionsverhalten. (Physiology and pathology of fatigue. 8th contribution: Light work in filing, its influence on metabolism and its relation to comparative production.) *Arbeitsphysiol.*, 1934, 8, 134-141.—A study of three groups of workers filing. The group with the highest production showed an increase in blood sugar and of phosphate creatinin and hydrogenion concentration in the urine. Comparatively small changes were found in the workers with the lowest production.—*H. E. Burtt* (Ohio State).

1910. Horowitz, E. L. Spatial localization of the self. *J. soc. Psychol.*, 1935, 6, 379-387.—Several experiences with children indicating a high degree of specificity in the localization of the self led to the collection of information from a class of 60 college students. Reports given included head, brain, eyes, face, heart, chest, hands, abdomen, etc. In some cases these localizations seemed to depend on chance associations; in others upon social factors. No consistent explanation of the answers was apparent.—*E. B. Newman* (Swarthmore).

1911. Jones, L. M. A factorial analysis of ability in fundamental motor skills. *Teach. Coll. Contr. Educ.*, 1935, No. 665. Pp. ix + 100.—The factors considered, together with the reliability of measurement of each, were: chronological age (.99), standing height (1.00), weight (.99), vital capacity (.94), running high jump (.83), standing bar vault (.79), rope climb of 20 feet for speed (.93), running 176 yards for speed (.87), throwing a baseball for accuracy (.40). The subjects were 2094 men students. Low intercorrelations between the measures were found. "The results of the application of the Tetrad Difference Criterion to the data do not indicate the presence of a central factor in the abilities in the nine traits studied." A review of previous studies is given. The bibliography lists 230 titles.—*J. M. Stalnaker* (Chicago).

1912. Khiltschenko, A. E. Vidnoshennya prostorovikh velichin yak umovnii podraznik. (The relation between spatial extents as a conditioned stimulus.) *Méd. exp., Kharkov*, 1935, Nos. 7-8, 133-150.—13 dogs, ranging in type between the extremely expressive and the extremely inhibitive, were conditioned to respond discriminatively to relations between spatial extents. Four sizes of black squares, triangles, circles and crosses were presented (usually in pairs) on a white ground, in such a fashion as to permit the animal to obtain a reward by pulling with his teeth the appropriate member of a suspended pair of figures and thus opening a door immediately behind them. After a preliminary training period with the two intermediate sizes of square figures, the animals were

tested with all of the figures in a variety of combinations. Discriminations were established on the basis of the relative magnitude of the figures, with all other factors (shape, absolute size, position, color intensity, smell, etc.) excluded as possible cues. The difficulty of the task varied with the typological peculiarities of the subjects. The question of physiological mechanism is not resolved.—*F. S. Keller* (Colgate).

1913. Kreutz, M. Zarys ramowej teorji woli. (Outline of a general theory of volition.) *Kwart. psychol.*, 1935, 6, 315-350.—A discussion of the components that make up volitional activity. The chief components considered are, first, the antecedents of voluntary movement and the different motives and impulsions toward movement, and second, the various voluntary movements themselves, including inhibitory, controlled, delayed and choice reactions.—*T. M. Abel* (Progressive Education Association).

1914. Lambert, E. F., & Rosenblueth, A. A further study of the electric responses of smooth muscle. *Amer. J. Physiol.*, 1935, 114, 147-159.—The electrical responses of three types of smooth muscle were studied in cats with silver-silver chloride needle electrodes and silver-silver chloride saline wicks with direct coupled amplifier. Stimulation of the sympathetic nerve or parasympathetic nerve supply was used in each case. Four potentials were identified and numbered I, II, IIIa, IIIb. The first of these had a latency of approximately 40 sigma and was followed either directly or at a short interval by potential II. The potentials IIIa and IIIb were of a longer duration. The potentials were less regular in the bladder, but it was felt that they could be analyzed from the records. It was found that potentials I and II did not depend on a change of resistance outside or inside of the muscle. Contraction began, as shown in the myographic record, at approximately the midpoint of potential II. It is suggested that potential I corresponds with the liberation of the chemical mediator from the nerve ending, that potential II overlaps the postulated combination of this mediator with receptive substance and also the contraction process, and that probably IIIb is synchronous with the process of contraction, but is masked at its initiation by the other potentials.—*T. W. Forbes* (N. Y. Psychiatric Institute).

1915. Latmanisowa, L. W. [The effect of ingestion of phosphates on the changes in muscular chronaxy during work.] *Fiziol. Zh. U.S.S.R.*, 1934, 17, 377-381.—Chronaxy was measured when operating an ergograph with or without the administration of phosphates. The phosphates produce a slight increase in resting chronaxy, a weakening of the usual increase of chronaxy after the work, and a speeding up of the changes in chronaxy after work of short duration.—*H. E. Burtt* (Ohio State).

1916. Laubry, C., & Brosse, T. Interférence de l'activité corticale sur le système végétatif neuro-vasculaire. (Interference of cortical activity on the neuro-vascular vegetative system.) *Pr. méd.*, 1935, 43, 1625-1627.—The authors wanted to learn whether or not the very precise effect of consciousness on the

respiratory rhythm was also to be found in other rhythms. Normal and pathological (cardiac) subjects were used. The conclusion is drawn that all concentration in the forebrain leads to a subordination of the mid-brain and to the normal automatism of the effective system.—*M. H. Piéron* (Sorbonne).

1917. Lindsley, D. B. Electrical activity of human motor units during voluntary contraction. *Amer. J. Physiol.*, 1935, 114, 90-99.—Action currents were recorded from single muscle units of 6 normal adults and from cases of myasthenia gravis by means of a six-stage amplifier, a loud-speaker and a Du Bois oscillograph. The cathode-ray oscillograph was used to check important points. Single and double conductor concentric hypodermic needle electrodes, a single fine wire through the muscle and two fine wires drawn through the muscle together were used as electrodes. Single motor units were found to give a characteristic discharge of uniform amplitude and fairly regular frequency. Frequencies varied from 5 or 10 to 30 per second, depending on strength of contraction. The change of frequency appeared gradually, while new muscular units appeared in stepwise fashion, suggesting that the former is probably the more delicate adjustment. With maximum effort in cases of progressive muscular atrophy which eliminated interference by reducing the number of active units, a maximum frequency of from 30 to 50 per second was obtained. In continuous contraction frequency remained the same and amplitude decreased. The original suggestion of A. Forbes that a rotation of active fiber groups might account for long-continued, apparently unfatigued response was not substantiated.—*T. W. Forbes* (N. Y. Psychiatric Institute).

1918. Missiuro, W. [Effect of physical exercise on respiratory changes.] *Przegl. Fizjol. Ruchu.*, 1933, 5, 163-186.—With the athlete the resting metabolism is below the average. As the exercise progresses there is a diminution of the respiratory quotient and the pulmonary ventilation. A decrease in thyroid is found at the end of exercise.—*H. E. Burtt* (Ohio State).

1919. Nagge, J. W. An experimental test of the theory of associative interference. *J. exp. Psychol.*, 1935, 18, 663-682.—It was the purpose of the study to determine to what extent the amount of retroactive inhibition, following interpolated activity, would be reduced by lessening the possibility of associative connection between the original and interpolated activities. When the sensory mode of presenting the second material was changed from that of the first, not only did higher average anticipation and savings scores result, but the average savings scores closely approached those of the conditions in which no interpolated material was introduced. The dissociation of two room environments in which the first and second learning activities occurred led to approximately the same amount of retroactive inhibition as occurred in that condition where two activities occurred in the same room environment. When the first of two learning activities involved the motor

pathways of one hand and the second the motor pathways of the other hand, there appeared to be less resultant retroactive inhibition than when both activities involved the same motor elements. The dissociation of the original and the interpolated activities through hypnotic technique led to less retroactive inhibition than occurred where the two activities proceeded in the same state.—*H. W. Karn* (Pittsburgh).

1920. Ourieff, F. J. Caractère du réflexe galvanique pendant un travail de force moyenne et de durée différente. (Nature of the galvanic reflex during work of average force and different duration.) *Travail hum.*, 1935, 3, 441-452.—The test consisted of lifting weights up and down between two platforms. The galvanic reflex was noted after an induction shock. During the first minutes of work the curve is sinusoidal, followed by abrupt deviations. With the heavy weights this sinusoidal effect continued throughout the work, but with the lighter weight irregularities appear after three minutes. With some subjects the reflex did not return to normal an hour after the work.—*H. E. Burtt* (Ohio State).

1921. Schermann, L. G. Der Einfluss von geistiger Arbeit auf die Muskelchronaxie. (The effect of mental work on muscular chronaxy.) *Arbeitsphysiol.*, 1935, 8, 446-452.—Decrease of chronaxy of the extensors and flexors of the fingers during mental arithmetic occurred in three-fourths of the cases.—*H. E. Burtt* (Ohio State).

1922. Schröder, G. Zeigt der Störungswert einer eingelegten Strompause beim Herzen dieselbe Art der Abhängigkeit von ihrer Lage im Reizstrom wie beim Skelettmuskel? (Does the disturbance value of an interpolated pause in current in the case of the heart indicate the same kind of dependence upon its position in the stimulus current as in the case of skeletal muscle?) *Z. Biol.*, 1934, 95, 437-444.—*R. R. Willoughby* (Clark).

1923. Schütz, K. Das Phänomen der "tetanisierten Einzelzuckung" am kuraresierten Skelettmuskel. (The phenomenon of tetanized single twitches in curarized skeletal muscle.) *Z. Biol.*, 1934, 95, 445-453.—*R. R. Willoughby* (Clark).

1924. Skaggs, E. B. Distribution of effort in a perceptual-motor task. *J. exp. Psychol.*, 1935, 18, 797-801.—It was the purpose of this study to ascertain the relative efficiency of three methods of distributing practice in a perceptual-motor task. The task consisted in replacing the blocks, which were in a standard position at the beginning of every trial, in a Goddard formboard. Three groups of subjects comparable in mental ability, initial formboard ability, general health, sex, and chronological age were employed. Group A worked the board 20 times per day for 5 consecutive days. Group B worked the board 10 times per day for 10 consecutive days, omitting Saturday and Sunday. Group C worked the board 5 times per day for 20 consecutive days, omitting Saturday and Sunday. Efficiency was measured at the end of the period of learning and again four weeks after the completion of the learning.

An analysis of the results leads the author to conclude that the method of more massed practice is more effective than those of more distributed practice. The more massed forms of practice also resulted in greater efficiency in the four-weeks retention or relearning test.—*H. W. Karn* (Pittsburgh).

1925. **Skinner, B. F.** A failure to obtain "disinhibition." *J. gen. Psychol.*, 1936, 14, 127-135.—It is possible to consider the phenomena of experimental extinction as changes in the strength of a reflex, rather than as effects of inhibition. Disinhibition does not fit into this proposed view. But the effects of extraneous stimuli on the curve of extinction of the lever-pressing activity in the rat do not indicate that disinhibition occurs, and Skinner believes that the concept is superfluous.—*H. Schlosberg* (Brown).

1926. **Skyarov, Ya. P.** Obnobichni umovni refleksi. (Unilateral conditioned reflexes.) *Méd. exp., Kharkov*, 1935, Nos. 7-8, 162-174.—Measuring the secretion of each of a parotid gland pair and stimulating differentially either side of the buccal cavity (by placing biscuit powder behind the cheek) unilateral reflex salivation was demonstrated in dogs. This unconditioned response was then conditioned to the sound of a bell, providing a unilateral conditioned reflex—thus demonstrating the possibility of differentiating the activity of right and left body-halves in relation to the specific action of conditioned and unconditioned stimuli. Further experimentation shows that the two glands in the same animal may be conditioned in their activity to different stimuli, and that the replacement of one unilateral reflex by another is accompanied by a brief inhibitory influence.—*F. S. Keller* (Colgate).

1927. **Thauer, R., & Peters, G.** Der Einfluss operativer und pharmakologischer Eingriffe am Labyrinth auf Körperhaltung und Bewegung. (The influence of operative and pharmacological interference with the labyrinth on body posture and movement.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 316-330.—The results of uni- and bilateral labyrinth extirpation are described. The effects of cutting the 8th cranial nerve and the injection into the labyrinth of cocaine and sodium citrate are also studied. The resulting conditions of body posture are discussed.—*M. A. Rubin* (Clark).

1928. **Tuan, C.** [The psychogalvanic reflex.] *Science (Chinese)*, 1935, 19, 853-882.—The author first gives a brief historical introduction to the study of psychogalvanic reflex, and mentions the works of Vigouroux, Féret, Tarchanoff, Sticker, Sommer, Veraguth and Müller, Linde, Wechsler and Crabbs, Gopalaswami, Godfroy, and others. It is pointed out that the intensity of psychogalvanic reflex is indicated by the degree of deflection on the electrometer as well as by the form of galvanogram curve. He then discusses the physical, physiological, and psychological factors in the psychogalvanic reflex, and concludes that the psychogalvanic reflex is fundamentally physiological in nature, and not necessarily psychologically related, though it may be aroused by

some psychological processes.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1929. **Validow, I.** [Contribution to the study of fatigue of muscle preparation.] *Fiziol. Zh. U.S.S.R.*, 1934, 17, 950-961.—In the gastrocnemius muscle after pronounced fatigue perfusion of calcium increases the contractions again. The duration of contraction of muscle thus reinforced is longer than normal.—*H. E. Burtt* (Ohio State).

[See also abstracts 1797, 1853, 1873, 1884, 1945, 1950, 1951, 1958, 1974, 2052, 2062.]

#### PLANT AND ANIMAL BEHAVIOR

1930. **Beritov, I. S.** O povedenii sobaki vo vremya ovaladevaniya pishchei. (A study of the eating behavior of the dog.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 269-271.—*L. A. Riggs* (Clark).

1931. **Beritov, I. S.** O psikhonervnykh osnovakh individualnogo povedeniya vischikh pozvonochnikh zhivotnikh. (The psychophysiological bases for individual behavior in the higher animals.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 274-277.—*L. A. Riggs* (Clark).

1932. **Beritov, I. S., & Tsereteli, M.** Issledovanie individualnogo povedeniya sobaki. (The study of individually acquired behavior in the dog.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 257-260.—*L. A. Riggs* (Clark).

1933. **Beritov, I. S., Tsereteli, M., & Akhmeteli, M.** O prispособлении молодых shchenkov k izmeneniyam obichnoi obstanovki. (Young dogs' adjustment to changes in their usual environment.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 260-262.—*L. A. Riggs* (Clark).

1934. **Bragadze, A.** K sravnitelnoi fiziologii povedeniya zhivotnikh. (Comparative physiology of animal behavior.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 272-273.—*L. A. Riggs* (Clark).

1935. **Brandt, H.** Eine Gewohnheitsbildung in der Bewegungsrichtung der Mehlmottenraupe *Ephestia kuehniella* Zeller. (Formation of a habit involving locomotor path in the caterpillar of the flour moth *Ephestia kuehniella* Zeller.) *Z. vergl. Physiol.*, 1934, 21, 545-551.—After having followed the edge of a circular dish in one direction for some time, the photo-negative flour moth caterpillar circles toward the same side in moving away from the source of directed light. There appeared to be a direct relationship between the duration of the forced movement and the persistence of the after-effect, constrained circling of 1-4 minutes showing its effect for 4-10 minutes thereafter. The change also persisted longer when the course followed during the exposure period was a circle of smaller diameter. Having learned a position habit in a glass T-tube, the caterpillar when placed in light circled in the way it had been trained to bend in the tube. In other cases, behavior in a T-tube showed the influence of a period of forced bending which preceded the test. The effects apparently never persisted into a new experimental day. This is considered a case of Kühn's "motor learning," and the results are used to explain the habit learned by

the earthworm in Yerkes' experiment.—T. C. Schneirla (New York University).

1936. Brown, R. H. The dim visibility curve of the rabbit. *J. gen. Psychol.*, 1936, 14, 62-82.—Conditioned respiratory responses to light of varying wave length and intensity were obtained from 3 rabbits. The stimuli were controlled by Wratten filters and wedges, and the relative energy content measured by a thermopile. The visibility curve obtained from the dark-adapted rabbit was very similar to corresponding curves secured by Hecht and Williams and by the present experimenter from human subjects. The fact that the curve is very similar to the absorption spectrum of rabbit's visual purple, although shifted 8  $\mu$  to the red, supports the view that visual purple mediates dim vision. The results also indicate that the conditioned respiratory response is a valuable tool in sensory studies.—H. Schlosberg (Brown).

1937. Brown, R. H. Color vision in the rabbit. *J. gen. Psychol.*, 1936, 14, 83-97.—Using the apparatus and one of the animals employed in his study of the dim visibility curve (see X: 1936) Brown was able to establish a conditioned breathing response to red light, and to extinguish the response to green. The discrimination was maintained in spite of energy changes which the experimenter thinks adequate to control brilliance. This evidence for color vision in the rabbit is consistent with the presence of cones in its retina. The absolute discrimination was obtained after some 500 reinforcements of the positive stimulus and 200 presentations of the negative one, but was difficult to maintain.—H. Schlosberg (Brown).

1938. Buytendijk, F. J. J. The mind of the dog. London & Boston: Allen & Unwin; Houghton Mifflin, 1935. Pp. 213. 8/6.—English translation of the author's *De Psychologie van der Hond*. Gives an account of many experiments both by other investigators and original. Discusses instincts, feelings and expressive movements, sense perceptions, tracking, visual cues in the dog, form perception, auditory reactions, conditioned reflexes, seeking, experience and insight. The book is illustrated by original photographs.—F. C. Bartlett (Cambridge, England).

1939. Crozier, W. J., Pincus, G., & Zahl, P. A. The resistance of *Drosophila* to alcohol. *J. gen. Physiol.*, 1936, 19, 523-558.—A straight line of negative slope describes the relation between the mean time-to-death ( $t$ ) of imaginal *Drosophila* of an inbred line and partial pressure ( $P$ ) of alcohol vapor.  $t$  depends upon the diffusion of the alcohol into the fly and not on any reaction between the substance of the fly and the alcohol. The relation between  $t$  and  $P$  is independent of temperature, but the invasion coefficient  $S = \Delta t / \Delta P$  declines with age and differs for the two sexes. The estimated  $P$  of alcohol to kill instantaneously fluctuates periodically with age. The fluctuations are exactly correlated with changes in the slope of  $S$  as a function of age. Periodic fluctuations of  $S$  and of the lethal dose are considered to be due to suppressed moults. Similar fluctuations in rate are found in the accumulation of deaths as a function of time (age) in one sex. The

statistical smoothing of such data is not legitimate.—M. A. Rubin (Clark).

1940. Diebschlag, E. Zur Kenntnis der Grosshirnfunktionen einiger Urodelen und Anuren. (Contribution to the knowledge of cerebral function in certain urodeles and anurans.) *Z. vergl. Physiol.*, 1934, 21, 343-394.—Frogs and salamanders deprived of their cerebral hemispheres were immobile, moved actively only in response to strong external stimulation, and showed important differences from the normal behavior. Operated frogs did not jump more than once when shocked a single time, and moved from intense sunlight with the greatest sluggishness. They croaked more readily than did normals, but there was no good evidence for the removal of a normal inhibiting function of the cerebrum. This sharp divergence from the results of other experimenters is attributed to the care taken not to injure parts of the brain other than the cerebrum. The decrease of "spontaneous" movement in decerebrated amphibians is responsible for the virtual absence of active food-taking and of mating from their behavior. Although the clasp response may be elicited from the decerebrate male frog, he is incapable of copulation. Operated animals showed characteristic nystagmus when a striped cylinder wall revolved about them, but did not subsequently swim with the visual movement as would normals. A discrimination between red and blue, or between colors and grays, was learned by normal salamanders in about 30 trials. Unilateral decerebration following training was without important effect on this habit, but the change was completely lost after bilateral extirpation of more than one half of the cerebrum. A position habit which conflicted with the initial turning tendency of a given subject usually remained after unilateral decerebration but disappeared after complete decerebration. An electric shock response conditioned to light, to an illuminated circle as against a cross, or to an oscillator tone, remained after unilateral decerebration or after removal of the hemisphere roof, but the bilateral removal of the anterior two thirds of the cerebrum materially retarded both learning and retention of such conditioned responses. Thus the forebrain is found to have a wider significance for general behavior in the investigated amphibians than is the case for fishes.—T. C. Schneirla (New York University).

1941. Evans, L. T. Social behavior of the normal and castrated lizard, *Anolis carolinensis*. *Science*, 1936, 83, 104.—Nineteen male lizards were found to arrange themselves in a series of dominance rankings which were closely correlated with weight. The number of combats (resulting from the "urge to acquire and to hold" territory) determined the order of dominance. The fighting pattern was found to consist of a chain of reflexes (8 of which were expressed overtly) which appeared in an almost unvaried temporal sequence. "This fighting pattern has also been observed in castrated males and females, but less in normal females. It is, therefore, inferred that the ovarian hormonal complex inhibits

fighting reflexes in normal females."—R. Goldman (Clark).

1942. Evans, S. **Flexibility of established habits.** *J. gen. Psychol.*, 1936, 14, 177-200.—Rats were trained on an elevated maze that had three pathways of different lengths. The two shortest and most preferred pathways had one element in common. If a rat, in following the shortest pathway, encountered a block on the common element, it promptly followed the longest and least preferred pathway, rather than the medium (blocked) one. Several control experiments were performed. Evans prefers a Gestalt type of explanation for the flexibility of the habit.—H. Schlossberg (Brown).

1943. Frisch, K. v. **Berichtigung zu meiner Arbeit "Über den Geschmackssinn der Biene."** (A correction to my study on the gustatory sense of bees.) *Z. vergl. Physiol.*, 1934, 21, 680.—The correction of a minor inconsistency which does not affect the general results of the previous study.—T. C. Schneirla (New York University).

1944. Hasama, B. **Hirnrinderregung durch Reizung des peripheren Geschmacksorgans im Aktionsstrombild.** (Cerebral cortex excitation by stimulation of peripheral taste organs recorded by means of action currents.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 36-44.—The effect of applying odoriferous solutions to the tongue of the rabbit is recorded electrically from the hippocampus. The location of the taste center is described. The nature of the odoriferous solution has no effect on the action current, but the action potential height varies logarithmically with the concentration. Strychnine injection increases taste sensitivity, while application of cocaine to the surface of the tongue may increase or decrease the sensitivity.—M. A. Rubin (Clark).

1945. Hasegawa, T. **Labyrinthreflexe nach Abschleuderung der Otolithenmembranen.** (Labyrinth reflexes after destruction of the otolith membranes.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 589-594.—Static reflexes and reflexes to turning movements are unaltered in frogs without otoliths. Reactions to continuous movements (i.e., up or down) are no longer seen in frogs lacking otoliths.—M. A. Rubin (Clark).

1946. Herter, K. **Körpertemperatur und Aktivität beim Igel.** (Body temperature and activity in the hedgehog.) *Z. vergl. Physiol.*, 1934, 20, 511-544.—Evidence is offered to support the hypothesis that the hedgehog's susceptibility to hibernation depends upon rhythmic changes in internal secretion. At temperatures between 14.5° and 17° C. a semi-waking condition is in effect, and temperatures below 15° C. induce hibernation proper. During hibernation temperature changes within the range 6-15° produce corresponding changes in body temperature, and body temperature typically runs slightly below the outer temperature.—T. C. Schneirla (New York University).

1947. Herter, K. **Dressurversuche mit Igeln. II. Form-, Helligkeitsdpressuren, Farbenunterscheidung, Labyrinthversuche, Rhythmus- und Selbstdressuren.** (Training experiments with the European

hedgehog. II. Form and brightness training, color discrimination, maze experiments, rhythm and self training.) *Z. vergl. Physiol.*, 1934, 21, 450-462.—With the sliding door apparatus used in earlier work the experimenter found that the hedgehog requires more than 550 trials to learn the discrimination between a pair of black figures on white grounds. By virtue of tests such as moving peripherally the sectors of a discriminated paddle-wheel figure (paired with a circle), it was shown that the form discrimination of this animal depends upon heterogeneity of figural content as well as upon variety in outline. When the former characteristic was experimentally altered the animals made relative choices on the basis of the latter. Trained to a brightness discrimination, they also responded relatively when new pairs of grays were presented. The hedgehogs were also able to learn maze patterns. They learned an alternation habit in entering sliding doors, and there was scattered evidence of an ability to respond to other successions. There were individual differences in the manner in which the animals chose the doors during training.—T. C. Schneirla (New York University).

1948. Holst, E. v. **Ueber den Prozess der zentralnervösen Koordination.** (The process of central nervous coordination.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 149-159.—The movements of the dorsal and pectoral fins of the fish *Labrus festivus* are recorded simultaneously by means of a kymograph. The former controls the frequency of beating of the latter. By section of the spinal cord the influence of the brain on the coordination between the two rhythms is studied. This coordinating effect is not reflex, but purely central.—M. A. Rubin (Clark).

1949. Holst, E. v. **Ueber den Lichtrückenreflex bei Fischen.** (The photic spinal reflex in fish.) *Pubb. Staz. Zool. Napoli*, 1935, 15, 143-158.—The fish *Crenilabrus rostratus* assumes a directional orientation which is a resultant function of both visual and labyrinthine stimulation. The amount of deviation caused by light is dependent upon its intensity. After one hour of dark adaptation light has lost its effectiveness, and equilibrium is regulated solely by the organs of static sensibility. Light gradually regains its effectiveness over a period of four days. Directional reflexes of the fins and eyes are also elicited by light and vary with the light intensity. Orientation along the longitudinal axis is tropotactic while along the transverse axis it is telotactic. Hence the fish swim on their backs when their static organs are extirpated and illumination is from below.—L. A. Riggs (Clark).

1950. Holst, E. v. **Weitere Reflexstudien an spinalen Fischen.** (Further studies of reflex activities in spinal fishes.) *Z. vergl. Physiol.*, 1934, 21, 658-665.—In the eel and loach, studied as spinal preparations, the sinuous locomotor movement may be demonstrated as the basic type of activity upon which all other movements and reflexes depend. This fundamental activity is modifiable in many ways through variation in the locality and quality of stimulation. The types of modification were studied by presenting

various stimuli to different spinal preparations. Certain stimuli (e.g., pressure of a small clamp) gave no after-effect regardless of intensity; other stimuli (e.g., a single pinch) would exert a facilitative after-effect, whereas stimuli such as electric shock would have an inhibitory after-effect. The capacity for rhythmic locomotor discharge, which in the goldfish is localized in the anterior spinal cord, extends much further caudad in the eel.—*T. C. Schneirla* (New York University).

1951. Huizinga, E. Durchschneidung aller Bogenzüge bei der Taube. (Transection of all the semi-circular canals in the pigeon.) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 52-59.—After transection of the semi-circular canals in the pigeon the turning reaction is almost entirely lost. The pigeons could fly as well as normal pigeons, even to the extent as serving as mail carriers, which seems to indicate some compensatory mechanism to make up for the loss of the semi-circular canals. The cristae in the canals are concerned with the regulation of the tonus of the skeletal muscles of the neck. In case this function is not restored after transection of the canals, strong disorders result which, to a great extent, are due to the lack of tonus in the neck muscles.—*M. A. Rubin* (Clark).

1952. Jores, A., & Caesar, K. G. Ueber die Wirkung des Melanophorenhormons auf Pigmentwanderung und Pupillenweite des Froschauges. (The effect of melanophore hormone on pigment migration and pupil size in the frog's eye.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 724-733.—In most cases application of melanophore hormone to the light eye caused darkening. This effect was hastened if the eye was previously dark-adapted. Hypophysectomy has no effect, but stimulation of the hypophysis by pinching it with tweezers caused a darkened condition of the retinal pigments. The cones were not affected. Melanophore hormone caused the frog pupil to dilate.—*M. A. Rubin* (Clark).

1953. Krinner, M. Über die Geschmacksempfindlichkeit der Elritzen. (Concerning the gustatory sensitivity of the minnow.) *Z. vergl. Physiol.*, 1934, 21, 317-342.—Because of dilution of the stimulative substances when presented in water, gustatory threshold values previously reported for fishes are much too high. Blinded minnows were introduced directly into saccharose or common salt solution, and fed there. After the training period, the subjects were tested for the characteristic food responses in solutions of decreasing concentration (water being used as control solution). Olfaction was eliminated by extirpation. Since they received the food response, 1/40,960 mol saccharose solutions and 1/20,480 mol salt solutions are above the stimulus threshold. The reaction time for salt was less than that for saccharose, indicating a qualitative difference between these substances. Below concentrations of 1/10,000-1/5,000 mol their qualitative effect was apparently the same. Minnows were trained to discriminate different concentrations of the same substance, and within limits the results for quantitative differentia-

tion followed the Weber-Fechner law. Receptor adaptation was demonstrated by the failure to respond after a series of trials with the same gustatory stimulus.—*T. C. Schneirla* (New York University).

1954. Krzywanek, F. W., & Glaub, M. Ist die verschiedene Sehschärfe unserer Haustiere durch die dioptrische Einrichtung ihrer Augen bestimmt? (Is the difference in visual acuity of our domestic animals determined by the dioptric arrangement of their eyes?) *Pflüg. Arch. ges. Physiol.*, 1935, 236, 348-355.—By photographing the retinal images in the eyes of the cat, dog, sheep, horse, and cow, an effort is made to determine whether there exist differences in the sharpness of the images. Since such differences could not be found with the method used, it is inferred that the dioptric apparatus in the eyes of all the animals investigated is in a position to project a sharp picture of the environment.—*M. A. Rubin* (Clark).

1955. Levy, D. M. A note on pecking of chickens. *Psychoanal. Quart.*, 1935, 4, 612-613.—Chance observation in a poultry yard having a floor of wire mesh raised above the ground, thus preventing natural pecking behavior, disclosed the chickens to have the habit of pecking one another to the extent of complete plucking. This behavior is considered analogous to that obtained by interference with the sucking reflex. Apparently just as excessive sucking results from the incompleteness of the sucking phase of feeding, so in chickens feather pecking results from incompleteness of the pecking phase in eating. Since nutritional needs are served in neither instance, the motivation is probably the instinctive urge for pleasure.—*M. H. Erickson* (Eloise Hospital).

1956. Lissmann, H. Körperhaltung und Bewegungsform eines Myriopoden im Zusammenhang mit seiner Autotomie. (The posture and movement pattern of a myriapod in relationship with its autotomy.) *Z. vergl. Physiol.*, 1935, 21, 751-766.—The centipede *Scutigera* loses terminal leg segments when mechanical, thermal, and other stimuli are locally presented. This is a purely local response, since it also occurs in narcotized beheaded animals. The experimenter describes corresponding changes in body and leg posture in consequence of the loss of certain combinations of legs.—*T. C. Schneirla* (New York University).

1957. Ping, C., & Wu, S. H. On the latency in producing effect on limbs by electric stimulation of the cerebral cortex of the guinea pig (*Cavia cobaya*). *Contr. biol. Lab. Sci. Soc. China*, 1934, 10, No. 2, 101-110.—Working on 25 male and 26 female guinea pigs, the authors found that the variation of the latency for the fore and hind limbs of different animals is high. It is practically impossible to get uniformity in its increase or decrease, since the body lengths of the animals do not differ enough and their body conditions vary one from another. There is, however, always an appreciable difference in the latent values for the fore and hind limbs of the same animal of either sex. The ratio between them may be generally expressed as 2. In this respect, the latency is

in direct proportion to distance. The results clearly show a "reciprocal phenomenon" in that the male has a quicker effect (smaller latency) on its fore limb than the female and the female has a quicker effect on its hind limb than the male, when their body lengths are equal or nearly so. The sex of the animal as an important factor in causing such a difference may find its morphological explanation in the motor cells of the spinal cord.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1958. Rademaker, G. G. J., & Ter Braak, J. W. G. *Das Umdrehen der fallenden Katze in der Luft.* (The turning of cats falling in the air.) *Acta oto-laryng.*, Stockh., 1935, 23, 313-343.—Normal cats when allowed to fall freely through the air, from any number of positions, always turn so as to land on their feet. Cats without labyrinths do not right themselves, but fall on their backs if held in a dorsal position when dropped. It is not known whether the turning is due to the otoliths, the semicircular canals, or both. Reproductions from motion picture films, diagrams, and mathematical formulae are used in an attempt to describe and explain the turning of the cats in the air when dropped from various positions, in many of which the cat's head was in a normal position in relation to the earth's surface.—M. B. Mitchell (New Hampshire State Hospital).

1959. Ribaud, E. *Provisions alimentaires, culture et élevages dans les sociétés animales.* (Feeding provisions, breeding and growth in animal societies.) *J. Psychol. norm. path.*, 1935, 32, 321-337.—The author examines the collecting habits of many social animals such as bees, ants, etc., to discover whether these activities really are in the nature of making provision for the future and whether this response is truly a social one. He concludes that the process of accumulation of many sorts of useless as well as useful objects is certainly not an act of forethought and that it is social only in the sense that a substance brought into the nest by one individual may perhaps be utilized by another; but this is only an occurrence facilitated by the proximity of the animals and does not show social animals to differ from solitary ones.—R. E. Perl (Columbia).

1960. Rodewald, W. *Die Wirkung des Lichtes auf die Hypophyse von Rana temporaria L.* (The action of light on the hypophysis of *Rana temporaria* L.) *Z. vergl. Physiol.*, 1935, 21, 767-800.—The melanophore hormone of the frog hypophysis is formed only when the gland is subject to the direct action of light. The amount of hormone formed increased directly with the intensity or with the wave length of the acting light.—T. C. Schneirla (New York University).

1961. Scheminsky, F. *Die zweiphasische Galvanotaxis der Seesterne.* (The diphasic galvanotropism of the starfish.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 200-205.—Arms, or pieces of arms, cut off from starfish show cathodic galvanotropism. Isolated ambulacral feet react oppositely. The mechanism of the cathodic galvanotropism found in the starfish is, according to the author: the electrical current causes the ambulacral feet to stretch and curl toward

the anode so that the whole animal is pushed by them toward the cathode.—M. A. Rubin (Clark).

1962. Spindler, M., & Blum, E. *Kleine Beiträge zur Psychologie des Seelöwen (*Eumetopias californianus*).* (Contributions to the psychology of the sea lion *Eumetopias californianus*.) *Z. vergl. Physiol.*, 1934, 21, 616-631.—The animals were able to recognize their keeper within 5-20 m., as was shown by certain tests. The keeper was recognized more readily when moving than when standing still. One experimenter was responded to mainly on the basis of a long white coat usually worn by her. When the keeper was motionless, changes in head appearance (e.g. spectacles or none, hat or bare-headed) did not appear to prevent recognition. Various changes in clothing were less disturbing when the head remained unchanged. Increasing change did not appear to remove recognition gradually, but finally a point was reached at which numerous changes or a few radical changes (e.g., long cloak instead of short coat) disrupted the process. Thus the keeper was effective as a Gestalt, and not as a group of characteristics. The response was given most readily when additional conditions such as time of day and condition of hunger were propitious. The same points also held for response to food objects. A colored artificial fish was discriminated from the real article at a distance, but the changing of a number of features (e.g., color, size, shape) on a given trial would disrupt the response most readily. With training the artificial objects were discriminated from fish at greater distances. The animals made more mistakes when someone other than their keeper held the test objects. Successful responses of a detour character were made in obtaining momentarily displayed food.—T. C. Schneirla (New York University).

1963. Steinhausen, W. *Ueber die Otolithen ausgelösten Kräfte.* (The forces exerted by the otoliths.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 538-545.—From the weight of the otoliths of pike the direction and magnitude of the forces exerted by them are calculated.—M. A. Rubin (Clark).

1964. T'ang, Y. *On the development of different placing reactions in the albino rat.* *Chin. J. Physiol.*, 1935, 9, 339-346.—Young albino rats were tested from birth to the age at which all the placing reactions were in full function. The results show that all the reactions make their first appearance practically between the 10th and 21st days of postnatal life, that is, practically within Sugita's second phase of cerebral maturation and Craigie's period of exceedingly rapid increase of cerebral vascularity. In general, the placing reactions of the forelegs appear before the corresponding placing reactions of the hindlegs. The relationships between the results of this study and the findings of previous investigators relevant to the problem have been discussed.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1965. T'ang, Y., & Wu, C. F. *The effects of unilateral labyrinthectomy in the albino rat.* *Proc. physiol. Sect. gen. Conf. Chin. med. Ass.*, 1935, 22-23.—Abstract.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1966. Tomilin, M. I. Death of the oldest chimpanzee in captivity. *Science*, 1936, 83, 103-104.—A general description of the behavior of a chimpanzee in his 40th year during the last few weeks of his life. It is surmised that death was due to "old age." The body has been given to R. M. Yerkes for study.—R. Goldman (Clark).

1967. Tsereteli, M. Izuchenie povedeniya shchenkov. (Notes on the behavior of young dogs.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 263-267.—L. A. Riggs (Clark).

1968. Tsereteli, M., & Akhmeteli, M. Vzaimodeistvye oboronitelnogo i pishchevovo povedeniya u shchenkov. (The reciprocal influence of shelter- and food-seeking behavior in young dogs.) *Trans. Inst. exp. Biol. Tiflis*, 1935, 267-268.—L. A. Riggs (Clark).

1969. Ulrich, H. Die Funktion der Otolithen, geprüft durch direkte mechanische Beeinflussung des Utriculusotolithen am lebenden Hecht. (The function of the otoliths demonstrated by the direct mechanical stimulation of the otoliths in living pike.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 545-554.—The otoliths of living pike were stimulated by a hair. Eye movements result from the pressure on the otolith. From such experiments the author concludes that the utricle is specialized for turning movements. For turning to the left in the long axis of the body the left labyrinth is stimulated, the right labyrinth controlling turning to the right.—M. A. Rubin (Clark).

1970. Wang, G. H., & Lu, T. W. Action potentials in the optic lobe of the pigeon induced by photic stimulation of the eye. *Proc. physiol. Sect. gen. Conf. Chin. med. Ass.*, 1935, 24-25.—Abstract.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

1971. Wolf, E., & Zerrahn-Wolf, G. Threshold intensity of illumination and flicker frequency for the eye of the sun-fish. *J. gen. Physiol.*, 1936, 19, 495-503.—Using a moving stripe system, it was found that to produce a threshold response in the fish the illumination intensity had to be increased with an increase in flicker frequency. The threshold illumination curve is made up of two distinct parts: (1) the rod portion at intensities below 0.04 millilambert and flicker frequencies below 10 per second, and (2) the cone portion at higher intensities and flicker frequencies than in (1). The maximum frequency of flicker that the sun-fish can perceive is about 50 per second. The flicker curve for the eye of the sun-fish is similar to that for man in that the transition of rod to cone vision occurs at the same intensity and flicker frequency, and the maximum perceivable flicker frequency is the same. The intensity range covered by the fish is much greater in the rod portion than for man.—M. A. Rubin (Clark).

[See also abstracts 1822, 1886, 1887, 1892, 1900.]

#### EVOLUTION AND HEREDITY

1972. Bracken, H. v. Zwillingsforschung und Psychologie des Gemeinschaftslebens. (Experiments

on twins and social psychology.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 138-140.—Since a pair of twins is not merely a summation of two individuals but represents a social structure, it is suggested that a further study of their relations will throw light on many problems in social psychology. It is probable that such factors as sex, temperamental type and family constellation influence the social relations of twins as much as those of others. Furthermore, the fact that identity of heredity causes identical twins to be more congenial than fraternal teaches an important lesson in social psychology.—H. Beaumont (Kentucky).

1973. Burks, B. S., & Jones, H. E. A study of differential fertility in two California cities. *Hum. Biol.*, 1935, 7, 539-554.—In Oakland the correlation between child's IQ and size of sibship was from -.22 to -.31, depending on the corrections applied. The relation between the number of children and economic status of the family are given. Every third family having a birth between January 1928 and June 1929 was studied for this report. In Berkeley the correlations between mother's age and natal intervals with socio-economic status constant were larger than similar ones from rural New England families. Owing to inferior facilities it was thought that birth control clinics did not affect the data.—O. W. Richards (Yale).

1974. Carmena, M. ¿Es la efectividad o nerviosidad personal una propiedad de origen hereditario? (Is personal tranquillity or nervousness a property of hereditary origin?) *Arch. Neurobiol.*, 1935, 15, 79-92.—The psychogalvanic reflex of 60 pairs of twins (36 monozygotic) was measured. Nervousness and kindred temperamental traits are largely a result of hereditary influences.—R. M. Bellows (U. S. E. S. Div. Standards and Research).

1975. Cook, R. A year of German sterilization. *J. Hered.*, 1935, 26, 485-489.—Data indicate a just and enlightened attempt on Germany's part to apply her recent sterilization law. In 1934, 205 eugenics courts and 26 superior courts of appeal were established. Schools were conducted by experts in law, medicine and genetics to train lawyers and physicians. About 75% (or 56,244) of the cases up for consideration were disposed of by the courts. This high proportion represents an early emphasis on the institutional cases. Later years may be expected to yield lower percentages. By December operations had been performed on 20 to 40% of the 84,256 cases subjected to sterilization action. 8219 cases (14%) appealed. In 377 the appeal was upheld; in 4559 the decision of the lower court was upheld. On the other hand, the superior court set aside the decision of the lower court in 179 cases which had been refused sterilization, and upheld the negative decision for 108 cases. These figures are important for the correction of errors which appeared in American newspapers in the spring of 1935. Problems complicating decisions of the eugenics courts were faced with a commendable conservatism by the administration: individual exemptions were extended to unusually talented individuals having hereditary defects, to cases whose

defects are not with surety grounded in the germ plasm, to all "carriers" who are not themselves afflicted with defect, and to a large proportion of the "sickness" cases who are beneficiaries of government health insurance.—*G. C. Schwesinger* (American Museum of Natural History).

1976. *Kroh, O. Psychologische Vererbungsfragen.* (Psychological problems of heredity.) *Ber. Kongr. dtsh. Ges. Psychol., Tübingen*, 1935, 14, 65-91.—Biological and psychological heredity cannot be clearly separated. Mental characteristics are determined by heredity to the extent that the direction, dynamics and extent of their development are partly determined by drives and functions. This functional basis of social behavior supplies a profitable field for psychological investigation, and it is the scientific as well as political duty of German psychology to develop more adequate methods of studying the psychological aspects of heredity.—*H. Beaumont* (Kentucky).

1977. *Mjøen, J. A. Die Vererbung der musikalischen Begabung.* (The inheritance of musical talent.) *Schr. Erblehr. Rassenhyg.*, 1934. Pp. 52.—*R. R. Willoughby* (Clark).

1978. *Sward, K., & Friedman, M. B. The family resemblance in temperament.* *J. abnorm. soc. Psychol.*, 1935, 30, 256-261.—Bernreuter self-ratings were collected from 387 family triads, each consisting of offspring, father, and mother. The subjects are highly selected, though drawn from non-clinical sources. Racially the families are Jewish and Nordic, and the two samples are equated in age, IQ, and social class. The results on family resemblance in so-called neurosis are three-fold: Temperamental resemblances seem to be lower than resemblances in intelligence and single physical traits. Parental resemblances are only faintly related to sex alignment. If anything, children resemble more closely the parent of the same sex. Family compactness in temperament is not a typical Jewish trait. An exception to this rule is the closer resemblance of Jewish mates.—*C. H. Johnson* (Boston Psychopathic Hospital).

1979. *Szondi, L. A családkutatás és ikerkutatás módszertani elemei.* (Methodical elements of family and twin research.) Kalocsa: 1935. Pp. 54.—Three lectures held at the station for research in heredity of the public hygiene institute of the Pázm-Pét. University of Science, Budapest. (1) Methods for demonstrating the hereditary nature of a disease or symptom. (2) Methods for the statement of the course of heredity. (3) Role of twin research in heredity. Appendix: (1) Guide for the composition of family books. Questionary for the detailed analysis of the biography of the propositus and the other bearers of given characters. (2) Catalogue of the most important hereditary diseases. (3) Probability of incidence of hereditary illness in Germany.—*P. Ranschburg* (Budapest).

1980. *Yule, E. P. The resemblance of twins with regard to perseveration.* *J. ment. Sci.*, 1935, 81, 489-501.—A battery of  $p$  tests of the Stephenson type was given to 115 pairs of twins and a control group of 60 unrelated children drawn from the London schools,

and roughly uniform in social status. Ratings on general intelligence were available from a previous investigation. The method of genetic classification had been previously reported by Herrman and Hogben. Monozygotic twins showed more resemblance in  $p$  than dizygotic, and dizygotic of like sex more than those of unlike sex. No sex differences were observed. Reliability and autonomy of the tests were studied, with the conclusion that they measure aspects of behavior not reflected in general intelligence tests.—*C. J. Herrick* (Pennsylvania).

[See also abstracts 2019, 2077.]

#### SPECIAL MENTAL CONDITIONS

1981. *Abraham, K. Amenhotep IV (Ikhнатон).* A psychoanalytic contribution to the understanding of his personality and the monotheistic cult of Aton. *Psychoanal. Quart.*, 1935, 4, 537-569.—(First published in German, 1912.) A study is made of the authentic material on ancient Egypt for information concerning the life and reign in the 18th dynasty of Amenhotep IV, who ascended the throne at 10 and died at 28, and who is regarded by authorities as the most remarkable figure in early oriental history. Each of the significant events and acts during his reign is discussed and their relationships to and bearing upon the course of his life, his personality, his attitudes and his teachings are elaborated in accordance with psychoanalytic principles and theories. Particularly are the roles of his father and mother in his life shown to be portrayed in his development of the monotheistic cult of Aton. Throughout analogies are drawn with the neurotic manifestations common among patients today, and the progress and the relationship to one another of the events occurring during the king's reign are shown to be in accordance with the postulates of clinical psychoanalysis. Also, throughout the article the applicability of psychoanalysis to cultural history is exemplified.—*M. H. Erickson* (Eloise Hospital).

1982. *Abraham, K. The history of an impostor in the light of psychoanalytic knowledge.* *Psychoanal. Quart.*, 1935, 4, 570-587.—(First published in German, 1923.) In 1918 the author made a psychiatric study of a 22-year-old male prisoner who since early childhood had repeatedly and successfully imposed upon others and had committed innumerable impositions, embezzlements, forgeries, and frauds. A reliable account is obtained of many of these offenses, which the patient attributed to a compulsion. He continued his offenses until 1919. Seen again four or five years later, it was learned that since June, 1919, he had been a most responsible citizen, and that this change of character had followed his marriage to a widow considerably older than himself and his establishment in economic security by her. Psychoanalytic consideration of his history discloses his offenses to have arisen as a result of the fixation of his libido in a state of narcissism in consequence of sibling rivalry, insufficient maternal love, failure of father-identification in the Oedipus situation, and consequent failure of proper development of his

Oedipus complex. The "cure" was effected by marrying a woman who could serve as a mother substitute, who gave him both love and economic security, and who permitted him to fill the father's place, thus satisfying the childhood wishes of his Oedipus complex.—*M. H. Erickson* (Eloise Hospital).

1983. Alexander, F. **The logic of emotions and its dynamic background.** *Int. J. Psycho-Anal.*, 1935, 16, 399-413.—"I hate him because he attacks me" is given as an example of emotional causal sequence to which the term emotional syllogism may be applied. Various of these emotional causal sequences are cited and discussed in relation to their own peculiar logic and the dynamic background giving rise to them. Consideration of the dynamic quality of the tendencies participating in emotional syllogisms discloses commonly a certain polarity in which expression of a tendency strengthens its polar opposite, e.g., suffering increases the tendency toward gratification. The study of psychological tendencies discloses three large categories, intaking, eliminating, and retaining, each of which may be subdivided into positive constructive and negative destructive aspects. The author then discusses these dynamic qualities and concludes that a certain dynamic equilibrium is established between these three vector quantities, intaking, eliminating, and retaining, which is biologically conditioned and which represents the fundamental dynamics of biological processes. Emotional syllogisms are the reflection in consciousness of the fundamental biological dynamics, which are to be understood and described both in psychological and biological terms.—*M. H. Erickson* (Eloise Hospital).

1984. Alexander, F. **The problem of psychoanalytic technique.** *Psychoanal. Quart.*, 1935, 4, 588-611.—The psychoanalytic technique formulated by Freud in 1912-1914 represents the findings of 15 years' intensive clinical study. Its clumsiness, its consumption of time and energy, and the difficulty of prognostication render desirable reduction of its inherent difficulties. By its very nature, long clinical experience is essential to learn the technique. Inexperience leads to over-emphasis of various aspects, with controversies revolving about the therapeutic evaluation of (1) emotional abreaction; (2) intellectual insight; (3) appearance of repressed infantile memories. Three trends in new techniques are (1) neocathartic experiments, (2) reconstruction and insight therapy, and (3) resistance analysis, but none of these innovations has received general acceptance. The author then discusses critically some of the technical procedures in the perspective of the development of the technical concepts of psychoanalysis. He concludes that the supreme requirement in the handling of psychoanalytic technique is a precise and detailed understanding of what is taking place in the patient at every moment and the making of total interpretations in which the actual life situation is connected with past experiences and with the transference situation. The principle of totality cannot be emphasized too much.—*M. H. Erickson* (Eloise Hospital).

1985. Bagno, C. **Synkretyzm myślenia w marzeniu sennym.** (*Syncretism of thought in the dream.*) *Kwart. psychol.*, 1935, 7, 61-80.—An analysis of adult dreams indicates some of the phenomena attributed by Piaget to the thinking of children, namely, verbal syncretisms of comprehension and reasoning, where thoughts and relationships between thoughts are expressed by means of verbal condensations and substitutions.—*T. M. Abel* (Progressive Education Association).

1986. Balfour, Earl of. **A study of the psychological aspects of Mrs. Willett's mediumship, and of the statements of the communicators concerning process.** *Proc. Soc. psych. Res., Lond.*, 1935, 43, 41-318.—*R. R. Willoughby* (Clark).

1987. Beck, F. L. **Hypnosis.** (Film.) Los Angeles: R. H. Seashore, 1936. 1 reel, 16 mm., 186 feet. Prices on request.—Observer number 1, a girl student, is hypnotized while relaxing in an arm chair, by repeated verbal suggestions to go into a sound sleep (instructions given in printed titles). Demonstrations include arm and eye catalepsy, raising a left hand as result of false statements concerning an electric current in a magnet held in right hand, opening of eyes and speech during trance state, and awakening from the trance. Observer number 2, a man, was an actual amnesia victim whose memory was restored by means of information gained under hypnosis through automatic writing (latter not shown). Observer 2 illustrates stages of deep hypnosis and considerable emotional activity as well as difficulty in awakening from the trance. A short verbal description of the background of the cases is also available as introductory material.—*R. H. Seashore* (Univ. Southern Calif.)

1988. Benton, A. L. **The interpretation of questionnaire items in a personality schedule.** *Arch. Psychol., N. Y.*, 1935, No. 190. Pp. 38.—The aims were (1) to determine whether abnormal subjects differ from normal subjects with respect to the interpretations which they make of questionnaire items and with respect to the extent to which they find questionnaire items ambiguous, and (2) to determine the relationship of the general factors of "scatter" and ambiguity of questionnaire items to the differentiating power, the retest reliability, and the character of the responses to the items. Among the conclusions were the following: (1) normal and abnormal subjects do not differ with respect to the interpretations which they make of the items; (2) they do not differ with respect to the degree to which they find the items ambiguous; (3) the degree of variation in interpretation of an item in a group of normal subjects is about the same as in a group of abnormal subjects.—*E. M. Achilles* (Columbia).

1989. Brown, R. H. **Drug addiction in its relation to extraversion, ambiversion and introversion.** *J. appl. Psychol.*, 1935, 19, 555-563.—162 morphine addicts were used in the study, with body-type differentiation according to Kretschmer used as the criteria of introversion, ambiversion and extraversion. The pyknic and athletic types include 29% each and

only 4% fall in the asthenic type. A Wertheimer index was also used and showed that 40% of the group fell in the pyknic type and 50% in the athletic type. A discussion is given of Wilson's study on 216 morphine addicts with the Bernreuter and the Neymann-Kohlstedt tests, in which morphine users are found to be relatively stable emotionally. The author concludes that the average morphine addict within the scope of the study falls into the pyknoid type, disproving McDougall's hypothesis of close affinity between the use of alkaloid drugs and introversion.—*M. B. Lynaugh* (Psychological Corporation).

1990. Carington, W. The quantitative study of trance personalities. II. *Proc. Soc. psych. Res., Lond.*, 1935, 43, 319-361.—*R. R. Willoughby* (Clark).

1991. Carington, W. Reply to Mr. Maby's note. *Proc. Soc. psych. Res., Lond.*, 1935, 43, 367-370.—*R. R. Willoughby* (Clark).

1992. Freud, S. Inhibitions, symptoms, and anxieties. (Trans. by H. A. Bunker.) *Psychoanal. Quart.*, 1935, 4, 616-625.—(First two chapters of *Hemmung, Symptom und Angst*, published in German, 1925.) Inhibition relates specifically to function, while symptom refers to a morbid process. Inhibition is best studied by consideration of disorders of function, and for such comparative study the sexual function, eating, locomotion, and vocation are selected. The means for the disruption of these several functions are enumerated and discussed and a definition is offered of inhibition as an expression of a functional limitation of the ego. Certain inhibitions arise as a means of avoidance of conflict with the id, others to avoid super-ego conflict. The mechanism of more general inhibitions is that of conservation of energy. Thus inhibitions represent limitations or restriction of ego functions either precautionary or as resulting from impoverishment of energy. The fate of instinctual impulses generated in the id striving for satisfaction is a failure of the discharge of excitation in consequence of the repression, with deflection or inhibition of excitation, thus giving the ego influence over the id. By repression, preconscious cathectis is withdrawn and is utilized by the ego for the release of unpleasure or anxiety in place of the pleasure of instinct gratification. In repression the ego functions under the influence of external reality and therefore excludes the result of the substitutive process from this reality.—*M. H. Erickson* (Eloise Hospital).

1993. Hoffer, W. Bericht über die Einleitung einer Kinderanalyse. (Report on the preliminaries to a child analysis.) *Z. psychoanal. Pädag.*, 1935, 9, 271-292.—In order to develop the proper attitude toward his analysis it is necessary to submit a child to a preliminary process during which he is to gain insight into his situation and confidence in the analysis which is to follow. This case history concerns a child of nine whose fears were very pronounced, but who was so well adjusted to his environment that he was not considered abnormal. The author describes the process whereby the child became more and more confidential and in the course of conversations and

correspondence with the analyst entrusted him with his three "darkest" secrets. At the end of this period the boy was ready for the analysis proper.—*H. Beaumont* (Kentucky).

1994. Husband, R. W. The comparative value of continuous versus interrupted sleep. *J. exp. Psychol.*, 1935, 18, 792-796.—“(1) To test the influence of interrupted sleep, a subject slept eight consecutive hours nightly for one month, and for the second month three hours, remained awake three, and then slept three more. Eleven mental and motor tests were administered each Saturday morning during both months. A physical examination was also taken each week at the same time. (2) The differences in performance between the two periods were very negligible. In those tests where there was learning, improvement kept taking place in spite of the alteration of sleep routine. Where performance ordinarily remains constant, there appeared only the usual daily fluctuations. There were suggestions as to very slight loss of efficiency in body sway and speed of tapping, but these were slight and inconsistent. (3) Health, from physical examinations and chemical tests, and from the subject's own feelings, remained excellent. (4) It is recognized that the use of only one subject makes the results only suggestive. However, all indications are in one direction, and we may say with complete assurance that the subject suffered no ill consequences at all from the slight reduction of sleep and the complete change in normal sleep habits.”—*H. W. Karn* (Pittsburgh).

1995. Leuba, J. Hermes ou Aphrodite? Le côté biologique du problème. (Hermes or Aphrodite? The biological side of the problem.) *Rev. franç. Psychanal.*, 1935, 8, 194-207.—*J. Mc V. Hunt* (Nebraska).

1996. Maby, J. C. Note on Mr. Carington's investigations. *Proc. Soc. psych. Res., Lond.*, 1935, 43, 362-366.—*R. R. Willoughby* (Clark).

1997. Marshall, C. R. A factor in hypnagogic images. *Mind*, 1936, 45, 67-70.—The structures causing entoptic phenomena and the pressure from closed eyelids have been made responsible for some dream visions. This view is shown to be erroneous and the true cause is asserted to be a “looking backwards” at retro-retinal structures and observing the chorio-capillary circulation. Hypnagogic images are also explained in this manner. The theory should be restricted to dream states arising in a hypnagogic or semi-conscious condition.—*H. Helson* (Bryn Mawr).

1998. Menninger, K. A. Unconscious values in certain consistent mispronunciations. *Psychoanal. Quart.*, 1935, 4, 614-615.—An example is reported of a word mispronunciation in a patient unwillingly nearing the end of analysis, in which the word “soon” was pronounced as “son” or “sun.” Her free associations disclosed this mispronunciation to be expressive of her desire to have a son, her desire to be a son, her desire to deny her vagina, and her wish to be masculine. With this interpretation, her resistance to the termination of the analysis began to disappear and no further

mispresentation of the word occurred.—*M. H. Erickson* (Eloise Hospital).

1999. Mishchenko, M. N. *Pro spivvidnoshennya mizh gipnotichnym stanom i eksperimentalnim snom u lyudini.* (The relation between hypnosis and experimental sleep in man.) *Méd. exp., Kharkov*, 1935, Nos. 7-8, 175-191.—Experiments upon four human subjects in the "cataleptic" stage of experimental sleep and under hypnosis lead the author to argue for an identity of the two states. The evidence from this study, taken with that reported earlier, indicates that each state shows: (1) a tendency towards transition into the profound ("narcotic") stage of sleep; (2) a similarity in conditioned-reflex activity (easy reinstatement of connections formed in the waking state, increased latent period, and decreased extent of reaction); (3) subcortical phenomena, e.g., catalepsy; (4) "rapport" with the experimenter; (5) general motor inhibition; (6) susceptibility to verbal suggestion; and (7) similarity of physiological mechanism, both states constituting a partial form of sleep.—*F. S. Keller* (Colgate).

2000. Ranschburg, P. *Az amidopyrinnel kombinált allylisopropylbarbitursavas készitmények hatása az emberi elmére.* (Effects of allylisopropylbarbituric acid combined with amidopyrin upon the human mind.) *Gyögyászat*, 1934, Nos. 41-43.—These investigations, made upon two normals and several insomnia patients, concerned (1) visual attention (Bourdon), (2) attention in arithmetic (300 multiplications of two-digit by one-digit numbers) and (3) memorizing word pairs exposed for 1½-2 seconds. Examinations were made before and during several weeks with daily application of 1-5 tablets containing .07 of an hypnotic (barbituric acid) and .11 of the antalgic (amidopyrin) substance. The effects were a strong need to sleep; dizziness; retardation of speech; paraphasia; dystaxia of hand movement in writing and drawing, and sometimes stumbling in walking. There was diminution of ambition concerning duties, with resistance to this behavior. There was also slight euphoria, with a tendency to diarrhea. Small doses of the hypnotic over a long period affected instinctive and voluntary activities. Rests of a few days extinguished the effects.—*P. Ranschburg* (Budapest).

2001. Ranschburg, P. *A nem-tudatos és tudatos működések magatartása a narkozisban és a narkozis után.* (Behavior of conscious and unconscious activities during and after narcosis.) *Oroszképzés*, 1934, 17-23.—Conclusions from investigations of reflexes and mental functions before, during and after rectal narcosis in 12 subjects. As in his experimental studies in 1896 on hypnotized cases of hysteria, the author differentiates primary, i.e., impersonal consciousness from higher, personal or self-consciousness. Narcosis produces narrowing of the personal consciousness up to complete disappearance, during which primitive, coherent conscious functions (rapport) are possible without the production of engrams (symbols) accessible to the awakened self.—*P. Ranschburg* (Budapest).

2002. Sachs, H. *Karl Abraham's contribution to applied psychoanalysis.* *Psychoanal. Quart.*, 1935, 4, 627-629.—Tribute is paid to the personal attributes and intellectual interests of Abraham. His place in the history of applied psychoanalysis is indicated by his extension of psychoanalysis "into a basic psychological interpretation of the highways and byways which have been and are still being traversed by mankind in its cultural development. Mythology, the history of religion, and creative art comprise a goodly portion of cultural history, and Abraham devoted himself successfully and in an exemplary manner to studies in every one of these fields." His work is regarded as containing "a wealth of suggestions and hints whose possibilities still remain unexhausted."—*M. H. Erickson* (Eloise Hospital).

2003. Schmeing, K. *Das "Zweite Gesicht" als niederdeutsche Stammeseigenart und als psychologisches (gestaltpsychologisches und eidetisches) Problem.* (Clairvoyance as a low-German racial characteristic and as a psychological—Gestalt-psychological and eidetic—problem.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 136-138.—The author reaches the conclusion that the existence of clairvoyance is no indication of abnormality. In many cases the predicted situation does not come true, which is to be expected since the phenomenon consists of a visually continued and expressed intrapsychic ideational or affective process.—*H. Beaumont* (Kentucky).

2004. Schmid, G. *Das Wachtraumbild, sein Wesen und seine Bedeutung für das Seelenleben.* (The character of day-dreams and their significance in mental life.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 294-297.—*H. Beaumont* (Kentucky).

2005. Stuart, C. E. *The Willoughby test of clairvoyant perception.* *J. appl. Psychol.*, 1935, 19, 551-554.—This paper serves as a critical evaluation of Willoughby's article appearing in this issue of the journal (see X: 2009). It is not necessary to use 200 runs of the Zener card pack; the guessing of an unopened pack of cards is the same as in Rhine's original experiment; there is no necessity for a chance pack since it would be better to compare each series with the "target" series, and the critical or significant ratio method is preferred for the comparison of human subjects rather than the chi-square test.—*M. B. Lynaugh* (Psychological Corporation).

2006. Thomas, C. D. *The word association test with Mrs. Osborne Leonard.* *Proc. Soc. psych. Res., Lond.*, 1935, 43, 371-396.—*R. R. Willoughby* (Clark).

2007. Wessely, Ö. *A tudatalatti lelki élet és a nevelés.* (Subconscious mental life and education.) *Gyermek*, 1935, 27, 1-3; 14-33.—Disclosure of an unconscious psychic world is mostly due to Freud, whose errors are pansexualism and the materialistic view of the world. Adler's types are real, but not types of the normal child. Adler's merit is to have proved that life is controlled not only by causes, but also by aims. Jung's unconscious is not suppressed, and his theory is evolutionary and creative. One of the

most important tasks of education is the creation of associations of inhibition. Healthy and self-controlled teachers may be able to sublimate drives into will, ambition and feeling. Education must lift the child into the higher culture, in order to help humanity into a higher cultural evolution.—P. Ranschburg (Budapest).

2008. Willoughby, R. R. A critique of Rhine's "Extra-Sensory Perception." *J. abnorm. soc. Psychol.*, 1935, 30, 199-207.—There seems little to commend about Rhine's investigations except their industry and their conscious sincerity. Instead of rigidly evaluating his data to determine the presence or non-presence of a principle, there is a tendency to assume its presence at all times and to add the assumption of counteracting factors in the failures.—C. H. Johnson (Boston Psychopathic Hospital).

2009. Willoughby, R. R. Prerequisites for a clairvoyance hypothesis. *J. appl. Psychol.*, 1935, 19, 543-551.—A pack of Zener cards (25 cards of five simple designs) was shuffled 3 times and cut once. The two subjects were familiar with the constitution of the pack and guessed it throughout before it was opened. The experimenter served as one subject by recording his own guesses, and an "empirical" chance series of guesses was introduced by shuffling a second Zener pack and recording it as the guessed series of a third subject. The conclusion (based on 200 runs for each subject) is that there is no evidence for clairvoyance, but the experiment is a demonstration of a technique which may be regarded as a prerequisite to the postulation of any extra-sensory hypothesis. The paper was presented as a critique on J. B. Rhine's monograph on extra-sensory perception.—M. B. Lynaugh (Psychological Corporation).

2010. Winterstein, A., & Bergler, E. The psychology of pathos. *Int. J. Psycho-Anal.*, 1935, 16, 414-424.—The word *pathos* is discussed in its German sense. The authors conclude that it constitutes a technique of defense employed by the ego in its endopsychic struggle with the super-ego. The "accuser" and the "martyr" types of the "pathetic" both deal with a conflict between ego and super-ego, the former choosing projection and aggression, the latter submission and self-surrender. However, pathos is not only a passive reaction of the ego to super-ego attacks, but it also includes aggression on the part of the ego as a measure of precaution against the super-ego. Not rarely the ego utilizes the mechanism of pathos to deprive the super-ego of its weapons of attack against the ego, which constitutes the reason why pathetic "beating one's breast" is often an excellent means of self-deception.—M. H. Erickson (Eloise Hospital). [See also abstracts 1793, 1850, 2015, 2149, 2215, 2223.]

#### NERVOUS AND MENTAL DISORDERS

2011. Albo, W. Dos parejas con la locura compartida. (Two couples with shared abnormality.) *Arch. Neurobiol.*, 1935, 15, 1-34.—From the analysis of four case studies (the first pair mother and daughter, the second sisters) it is concluded that such

mental abnormality may be communicated; that this type of abnormality is a pseudopsychosis of suggestion which may be produced by active persuasion.—R. M. Bellows (U. S. E. S. Div. Standards and Research).

2012. Bahr, M. A. Mental hygiene as a factor in social work. *Ind. Bull. Char. Correct.*, 1935, No. 220, 609-619.—The fields of interest of mental hygiene and social work overlap to a considerable extent. Therefore all social workers should have some professional training in psychiatric social work.—C. M. Louttit (Indiana).

2013. Bahr, M. A. Insanity and crime. *Ind. Bull. Char. Correct.*, 1935, No. 220, 644-651.—The legal test of insanity, viz., "Whether a person knows the difference between right and wrong," is inadequate, and its use may result in serious consequences. Each type of psychosis may be an influence in criminal behavior, yet the legal test would have no meaning in many of them. The law should utilize modern psychiatric knowledge.—C. M. Louttit (Indiana).

2014. Baird, J. H. Psychoses of the presenium. *U. S. Veterans' Bur. med. Bull.*, 1935, 12, 135-142.—Presentation of 6 cases, with interpretative comment, of pre-senile psychoses in ex-service men.—C. M. Louttit (Indiana).

2015. Bartlett, M. R. Suggestibility in psychopathic individuals: a study with psychoneurotic and dementia praecox subjects. *J. gen. Psychol.*, 1936, 14, 241-247.—The amount of sway in response to suggestion was measured by observing the shadow of a pointer on a scale. The scores of 26 normal subjects were distributed in a normal curve, quite similar to that obtained from 21 psychoneurotics. But of 25 schizophrenics the only ones to show positive movements were 4 paranoid, while three-fourths of the other sub-groups gave negative responses.—H. Schlosberg (Brown).

2016. Bartlett, M. R. The sensory acuity of psychopathic individuals. A comparison of the auditory acuity of psychoneurotic and dementia praecox cases with that of normal individuals. *Psychiat. Quart.*, 1935, 9, 422-425.—There appears to be no significant difference of acuity among the three groups.—C. R. Atwell (Boston Psychopathic Hospital).

2017. Benedek, L. Az u. n. "sérülések idegesesség"-ról, annak határterületéről stb. (The so-called accident neurosis, its border lines, etc.) Budapest: 1935. Pp. 160.—Psychologically important chapters are: (2) Origin and symptomatology of accident or traumatic neurosis. (3) Role of the environment; aggravation. (5) Origin of the accident neurosis from the standpoint of psychoanalytic and individual-psychological theories. (6) Physiopathetic phenomena; organic syndromes in connection with neurotic elements. (18) Photographs: (A) forensic judgments; (B) war observations; (C) clinical reports.—P. Ranschburg (Budapest).

2018. Bowler, A. C., & Bloodgood, R. S. Institutional treatment of delinquent boys. Part I. Treatment programs of five State institutions. *U. S. Child. Bur. Publ.*, 1935, No. 228. Pp. 324.—Describes the

physical plant, administrative methods, personnel, daily activities of boys, medical and psychological service, educational program, recreational and religious activities, records, parole and discharge for each of these institutions: Whittier State School, Calif., Boys' Vocational School, Mich., State Home for Boys, N. J., State Industrial School, N. Y., Boys' Industrial School, Ohio. The final chapter summarizes the findings and points out their significance for treatment problems.—C. M. Loultit (Indiana).

2019. Bradway, K. P. **Paternal occupational intelligence and mental deficiency.** *J. appl. Psychol.*, 1935, 19, 527-541.—A study was made of 439 feeble-minded children at Vineland Training School. The data on IQ, etiology and paternal occupation were classified. The distribution of paternal occupation for 116 feeble-minded subjects of primary etiology was skewed toward the lowest occupational class. For 123 feeble-minded subjects of secondary etiology, the curve of distribution was symmetrical and resembled a random sample of adult males in Minneapolis. The distribution of paternal occupation for the total group was found to be undifferentiated and irregular. Negative relationship between IQ and paternal occupational status was found for all three groups.—M. B. Lynaugh (Psychological Corporation).

2020. Burchard, E. M. L. **Physique and psychosis: an analysis of the postulated relationship between bodily constitution and mental disease syndrome.** *Univ. Pittsb. Bull.*, 1935, 32, No. 1, 1-10.—407 male white patients from four hospitals were studied. 250 were divided equally between circular insanity and schizophrenia; the remaining cases constituted a random sample of the hospital population. The patients were classified as to physical type according to the Kretschmerian impressionistic method; anthropometric measures were taken; the experimenter collected his data before finding the hospital classifications of his subjects. The equivocal nature of the data reveal the need for extreme care in selecting control groups. "Although a general tendency in support of Kretschmer's claims is found, the overlapping is everywhere so great and the possible influence of age such an equivocal one that the validity of the theory is shown to be open to serious question."—R. Goldman (Clark).

2021. Carrara, M. **Il concetto medico legale dell'infirmità di mente in rapporto all'interdizione.** (The medico-legal concept of mental infirmity in relation to deprivation of civil rights.) *Arch. Antrop. crim.*, 1935, 55, 866-885.—In this article the author discusses two cases of mental infirmity, in one of which the court pronounced interdiction, although the mental ailment was not chronic or of such a nature as to render the afflicted individual incapable of looking after his own interests; while in the other case the court hesitated to pronounce interdiction although the individual acted against his own and his family's interests. The thesis defended by the author is that the interests of which the civil code speaks are not only of a material or economic nature but also of a moral and social nature.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

2022. Chou, S. K. [A study of mental depression of Chinese students and mental hygiene.] *Quart. Rev. Sun Yat-sen Inst. Advanc. Cult. Educ.*, 1934, 1, 707-727.—A Chinese version of Thurstone's neurotic inventory (containing 223 questions) was sent to university and normal-school students and other persons at Peiping, Tsinan, and Taiyuan. A total of 855 replies of the questionnaire was obtained. Only 70 copies came from the girls. The data were treated in 7 separate groups, and the method of scoring used was the same as Thurstone's. Frequency distributions were tabulated and plotted. Taking the average number of annoyances as a criterion of the degree of mental depression, the order of the groups was: Group VI (representing students of Taiyuan Provincial Normal School, 86 boys), Group III (representing students of Fu Jen University, 49 boys), Group II (representing students of Peiping University, 116 boys and girls, mostly freshmen), Group V (representing students of Tsinan training course for educational administrators, 85 adults), Group VII (representing 193 miscellaneous persons, men and women), Group IV (representing students of the Annexed Middle School of Peiping Normal University, 80 Senior Class I boys and girls), and Group I (representing students of Tsing Hua University, 246 boys and girls, mostly freshmen). There is marked inter-school difference, the group average number of annoyances ranging from 70 to 98. Comparison of the degree of mental depression between Chinese and Americans showed that the average score of 855 normal Chinese was much higher (a difference of 34 more annoyances) than that of 1217 normal Americans, and even higher (a difference of 14 more annoyances) than that of 138 women prisoners and 82 neurotic persons. The normal Americans scored highest at 140 annoyances, the Chinese at 190 annoyances. The abnormal Americans scored 25 more annoyances than the normal people. The frequency curve of the normal Americans is skewed toward the left, while that of the Chinese is a normal distribution and is quite similar to that of the abnormal Americans. Again, using Thurstone's criterion, it was found that there only .8% of 855 Chinese students as against 9.9% of 694 Chicago University students were unusually well-adjusted (inventory scores 0-14), but 37.5% of Chinese students as against .7% of Americans should receive psychiatric advice (inventory scores 85-139), and there were 2.2% of normal Chinese students as against .7% of neurotic Americans who scored 140-189 annoyances. The author also briefly discusses the importance of mental hygiene of students and reviews the recent movement for mental hygiene in America and Europe. The need for mental hygiene of Chinese students is urged.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2023. Cimbal, W. **Die Neurosen des Kindes- und Jugendalters mit besondere Berücksichtigung von Lernschwäche und Schwererziehbarkeit.** (The neuroses of childhood and adolescence, with special reference to difficulties in learning and teaching.) (Rev. ed.) Berlin: Urban & Schwarzenberg, 1935. Pp. 490. RM. 12.00.—R. R. Willoughby (Clark).

2024. Curran, F. J., & Schilder, P. Paraphasic signs in diffuse lesions of the brain. *J. nerv. ment. Dis.*, 1935, 82, 613-636.—"Our findings point to the importance of aphasic signs in seemingly confused utterances in toxic psychosis and allow at least a preliminary approach to these psychoses from the point of view of brain pathology. We wish to emphasize the importance of general factors of an organic nature as well as personality factors in these cases of speech disturbances due to localized lesions of the brain. We describe also a particular type of speech disturbances after head injury. We believe that speech disturbances of minor degree coupled with impulse disturbances have also a deep influence on the thinking processes in general lesions of the brain of traumatic and toxic origin. Although the speech disturbances observed are not identical with schizophrenic speech disturbances, an inner relation doubtlessly exists and points to the possibility of an organic nucleus for schizophrenic speech disturbances."—C. R. Atwell (Boston Psychopathic Hospital).
2025. De la Vega, P. La investigación orgánica en la esquizofrenia. (The organic investigation of schizophrenia.) *Arch. Neurobiol.*, 1935, 15, 117-144.—Tuberculosis, abnormal metabolism, endocrine alterations, lesions in the vegetative nervous system, and circulatory mechanism and blood count are pertinent factors in the diagnosis of schizophrenia. Literature concerned with anatomicohistological and neurological modifications as related to schizophrenia is reviewed. A bibliography of 114 references is appended.—R. M. Bellows (U. S. E. S. Div. Standards and Research).
2026. Frank, C. La corticosi parziale quale causa unica e prima delle malattie funzionali e organiche (la suggestibilità patologica). Classificazione generale delle malattie. Il procedimento corticale quale unica profilassi e terapia causale e radicale delle malattie funzionali e organiche. (Partial corticosis as the sole and primary cause of functional and organic diseases (pathological suggestibility). General classification of diseases. The cortical proceeding as sole prophylaxis and causal and radical therapy of functional and organic diseases.) *Arch. gen. Biopsicol. Biopsicopat.*, 1932, 2, 34-52; 66-96.—A general systematic classification of diseases, which according to the author are all, with the exception of those produced by injury, poisoning, want of nutriment and late senile involution, due to pathological auto-suggestions (pathogenic affect) which cause partial corticosis (depression and anguish). From this we get the deduction that the only curative and prophylactic causal therapeutic treatment is psychotherapy.—R. R. Willoughby (Clark).
2027. Garma, A. Paranoia y homosexualidad. (Paranoia and homosexuality.) *Arch. Neurobiol.*, 1935, 15, 251-272.—A review of the literature (particularly Otto Kant, Freud, Kretschmer) shows paranoia to be associated with homosexuality. Paranoia has been shown to occur in individuals in whom repression of the libido does not exist.—R. M. Bellows (U. S. E. S. Div. Standards and Research).
2028. Hegge, T. G. Research opportunities in an institution for the high-grade mentally deficient. *Psychol. Exch.*, 1935, 4, 47-49.—The author briefly describes the clinical records available at the Wayne County Training School at Northville, Michigan, and mentions opportunities for research which are peculiar to an institution for the mentally deficient.—H. Cisney (Worcester State Hospital).
2029. Hsiao, H. H. [Abnormal psychology.] Nanking: Cheng Chung Book Co., 1934. Pp. 302. \$1.50 Mex.—This book is written with the intention "to review the facts recently found about abnormal psychology" and also "to present a brief analysis of some major theories of psychosis." The chapter headings are: (1) meaning and content of abnormal psychology; (2) value of abnormal psychology; (3) historical background of abnormal psychology; (4) causes of (organic) psychoses; (5) causes of (functional) psychoses, wherein the theories of the conditioned reflex, of redintegrative mechanism, of mental force, of life energy, of individual psychology, of the coconscious, and the psychoanalytic and purposivistic theories are discussed; (6) diagnosis and examination of psychoses and psychoneuroses; (7) treatment and cure of psychoses and psychoneuroses; (8) sensory symptoms; (9) perceptual symptoms; (10) symptoms in memory; (11) symptoms in thinking; (12) emotional symptoms; (13) motor symptoms; (14) abnormalities of sleep; (15) infection of bacteria leading to various neuroses; (16) effects of narcotic drugs; (17) abnormalities of glands; (18) deficiency of nerve cells; (19) cerebral decay, hardening of blood vessels, and other senile changes; (20) psychoses of ambiguous origin; and (21) psychoneuroses (functional). References are given at the end of each chapter.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).
2030. Jackson, J. A. The relation of the state hospital to the social service field. *Ind. Bull. Char. Correct.*, 1935, No. 220, 623-631.—Describes the operation of out-patient mental-hygiene clinics at the Danville State Hospital.—C. M. Louitt (Indiana).
2031. Jackson, J. A. Fundamentals of good mental health. *Ind. Bull. Char. Correct.*, 1935, No. 220, 638-644.—C. M. Louitt (Indiana).
2032. Janet, P. Réalisation et interprétation. (Realization and interpretation.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 329-366.—Realization consists in accepting facts and integrating them into the personality. Thus the present is connected with the past and future. Some patients refuse to accept the fact of the death of a relative with whom they have lived; this is non-realization. Obsessions sometimes develop in the patient's attempt at realization of painful events. Some patients attach undue significance to insignificant things such as the presence of little pebbles on the steps or a bit of red paper. They may weave stories around them in an attempt to explain why they consider the useless articles so important. In extreme cases, the interpretations are projected outward in the form of auditory hallucinations.

tions.—*M. B. Mitchell* (New Hampshire State Hospital).

2033. Kaménéva, E. Sur les limites et les particularités symptomatologiques des formes légères de la schizophrénie. (On the limits and the symptomatological peculiarities of light forms of schizophrenia.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 565-596.—Cases of light schizophrenia do not always incapacitate the patient. The symptoms develop slowly and are more readily recognized subjectively than objectively. The patients may complain of inability to concentrate, distraction, and difficulty in perception, but still do their intellectual work. They may be mistaken for psychopaths or neurotics. Paranoid tendencies may develop slowly.—*M. B. Mitchell* (New Hampshire State Hospital).

2034. Knopf, O. Preliminary report on personality studies in thirty migraine patients. *J. nerv. ment. Dis.*, 1935, 82, 270-285; 400-414.—“A certain type of personality prevails in a group of 30 cases of migraine. (1) The patients are, on the whole, of the goody-goody type, very ambitious, reserved, repressed, and ‘dignified,’ sensitive, domineering and possess very little sense of humor. (2) The genital phase adjustment of all the 22 women was incomplete. (3) The structure of the personality and the psychological adjustment of the individual play, to our belief, as great a role in the provocation of the illness and in the precipitation of the single attack as do the constitutional factors. (4) In the overwhelming majority of cases events could be found to have taken place shortly before the onset of the illness which are similar to those that may be found preceding the onset of a common neurosis or personal maladjustment. The same holds true for changes with regard to frequency and intensity. Included in these happenings are the onset of menstruation, pregnancy and the gestation period. (5) The psychological readjustment of the patient deserves to be given a greater place in the therapy of the migraine patient than it has had so far.”—*C. R. Atwell* (Boston Psychopathic Hospital).

2035. Kreezer, G. Motor studies of the mentally deficient: Quantitative methods at various levels of integration. *Train. Sch. Bull.*, 1935, 32, 125-135.—A series of studies was made at Vineland upon motor functions of the mentally deficient. The first study was concerned with differences between mentally normal and feeble-minded subjects in amplitude of movement at various points. The feeble-minded tended to fall below the normal in the amplitude of practically all the movements examined. A second study was concerned with the differences in excitability of the muscles of mentally normal and mentally deficient subjects. There are lines of evidence that the chronaxies of motor nerves of muscles depend on the influence of higher centers in the brain. To determine how motor chronaxies for subjects of different intelligence levels vary, 50 male adults ranging in mental age from three years to normal adult were used. The chronaxy of the triceps tends to vary inversely with mental age. The results suggest the hypothesis that the higher level of chronaxy

found for the low-grade feeble-minded groups is due to developmental defects in the brains of the subjects.—*E. M. Achilles* (Columbia).

2036. Lafora, G. Sobre la presbiofrenia sin confabulaciones. (On senile dementia without confabulations.) *Arch. Neurobiol.*, 1935, 15, 180-211.—Three case studies of the type of senile dementia characterized by spatial and temporal disorientation and related symptoms not accompanied by the usual evidence of amnesia in dissociated conversation.—*R. M. Bellows* (U. S. E. S. Div. Standards and Research).

2037. Levy, E. M. Mental deficiency. *U. S. Veterans' Bur. med. Bull.*, 1935, 11, 229-236.—Brief general discussion of feeble-mindedness, including prevalence, relation to crime, care and sterilization.—*C. M. Louttit* (Indiana).

2038. Luce, H. R., & others. The nervous breakdown. Garden City: Doubleday, Doran, 1935. Pp. 93. \$1.00.—The essential facts, for the layman, about the nervous breakdown, its cause, symptoms, and cure.—(Not seen).

2039. Malzberg, B. Race and mental disease in New York state. *Psychiat. Quart.*, 1935, 9, 538-569.—Among Italians, Germans, Irish, English and Scandinavians, the Irish possessed by far the highest rate of first admissions to all institutions for mental disease, their high rate being due primarily to mental disorders associated with old age and alcoholic addiction. The theory that the highest rates of mental diseases are found among the more recent immigrant groups and the lowest among immigrants from northwestern Europe is contrasted with the fact that this analysis indicates that Italians had lower rates than all foreign-born whites, while the highest rates were found among the Irish and Scandinavians.—*C. R. Atwell* (Boston Psychopathic Hospital).

2040. Marsh, L. C. Group therapy and the psychiatric clinic. *J. nerv. ment. Dis.*, 1935, 82, 381-393.—Attention is called to the fact that facilities for private treatment of psychiatric cases, at the present time, are quite limited, that very few persons can afford the services of a private psychiatrist, and that there are considerable shortcomings in our present facilities for psychiatric treatment. The group treatment of psychiatric patients has certain special advantages over individual treatment, particularly in providing a therapeutic compulsion, a helpful transference which is easily broken, and an educational and attractive set-up. Resistances of patients are more easily overcome; enthusiasms are engendered which are not so prominent in private treatment; and the impersonality of the situation makes the patient more amenable to treatment. It has been found by experience that at least 75% of the material covered in private treatment of patients could be embodied in a course of lectures. The author's experience with the group treatment of psychiatric patients is described. It is believed that the plan, as described, is superior to the psychiatric or mental-hygiene clinic and would enable us, with present facilities, to handle a great many more patients. Emphasis is placed on

the belief that patients should be regarded as students, and that the process should be an educational rather than a medical procedure.—C. R. Atwell (Boston Psychopathic Hospital).

2041. Marui, K. Ueber den Introjektionsvorgang bei Melancholie. (The process of introjection in melancholia.) *Arb. Psychiat. Inst. Tohoku Univ.*, 1934, 3, 1-12.—See IX: 3281.—R. R. Willoughby (Clark).

2042. McKendree, O. J. Some determinants of favorable results in psychiatric patients. *Psychiat. Quart.*, 1935, 9, 392-399.—C. R. Atwell (Boston Psychopathic Hospital).

2043. Meier, C. Effect of prizes in increasing the word learning of subnormal children. *Train. Sch. Bull.*, 1935, 32, 146-157.—The purpose was to determine the effects of incentives (prizes) in the learning of words, i.e. recognition of words, under classroom conditions in a class of subnormal children. 16 children aged 6 to 13 chronologically and 3 to 7 mentally, IQ range 33 to 70, were the subjects. They were tested weekly for 13 weeks on word lists made from reading charts. After three weeks incentives were offered in alternate weeks to those who increased the number of words recognized at the end of these weeks. The indications are that the direct use of prizes increases both the effort and to a large extent the accomplishment in learning tasks. Rewards that are too familiar lose their appeal. Intrinsic values have to be depended upon in the long run. Where a child or group does not seem to work up to capacity, the application of an incentive may show where some of the causes lie; the incentive may be used as a diagnostic factor. If the incentive works, it should be used only until a better means is found.—E. M. Achilles (Columbia).

2044. Milici, P. A psychic defense against disagreeable reality. *Psychiat. Quart.*, 1935, 9, 617-630.—The report of a schizophrenic patient who reacted to difficulties with a marked retrograde amnesia, puerile behavior, some of the peculiar features of prison psychosis, and paranoid projection.—C. R. Atwell (Boston Psychopathic Hospital).

2045. Minski, L. An investigation into the after-history of 90 patients discharged from a mental hospital against advice. *J. ment. Sci.*, 1935, 81, 509-513.—It was possible to trace 73 of 90 patients discharged against advice. Of these 25 are in mental hospitals, 24 have recovered, 16 are at home unimproved, 7 have committed suicide, and 1 other has died. None of these patients had been certified. The high suicide rate emphasizes the unwisdom of voluntary commitment in cases of severe depression. Analysis according to clinical variety and later disposition of the cases shows that relatives generally view those involving excitement as more serious.—C. J. Herrick (Pennsylvania).

2046. Müller, M. Prognose und Therapie der Geisteskrankheiten. (Prognosis and therapy of mental diseases.) Leipzig: G. Thieme, 1936. Pp. 164. RM. 7.20.—R. R. Willoughby (Clark).

2047. Naegelsbach, H. Zur graphologischen Beurteilung psychopathischer Fälle. (Judging psychopaths by graphology.) *Z. angew. Psychol.*, 1935, 49, 258-269.—Comparison was made of the handwriting of 89 cases, 59 being "disturbing elements" and the rest incapables. The excitability, force, and overstimulation of the first group were reflected in the writing samples, which are powerful, free, and ample. The writing of the incapables, including weak-minded cases and psychasthenics, was cramped, hesitant, constrained, and slow. The two classifications cut across systems of abnormality.—H. D. Spoor (Northeastern).

2048. Peterson, W. F. The patient and the weather. Vol. I, Part I. The footprint of Asclepius. Ann Arbor: Edwards Bros., 1935. Pp. 127.—The first of a series of studies on the effects of the weather, Volumes II and III of which have already been published. The author reviews the Hippocratic attitudes on the place of meteorology in medicine and attempts to demonstrate the truth of these views when applied to America. He describes "the changing restlessness of the winds" in America, and gives maps showing the storm tracks and the regions of greatest meteorological demand on the organism. An analysis of "racial differentiation," under which is included fertility, defective physical development, defects of special sense organs, malformation, cerebral capacity, and insanity, is made in relation to these meteorological regions. A similar regional analysis is made for disease. In the final chapter the author discusses, among other subjects, the effect of environmental instability, the conditioning of the material organism during gestation, and the restlessness of the American in relation to the meteorological demands of the American environment.—D. Shakow (Worcester State Hospital).

2049. Potter, H. W. Psychotherapy in children. *Psychiat. Quart.*, 1935, 9, 335-348.—Direct psychotherapy is essential in dealing with problem children. It should be adjusted to the age level and personality of the child. Physical, intellectual, emotional, social and experiential factors in the child have either a direct or an indirect influence on the mental attitude of the child and constitute the chief points of difference between children and adults. The psychotherapist dealing with children must be an opportunist and capable of varying his technique and approach. Psychiatric problems in children, excepting those directly dependent upon somatic defects or lesions, fall into two large groups; those with psychoneurotic-like reactions in which conflict is expressed not overtly but through conversion, anxiety and compulsive symptomatology and those whose conflicts are expressed directly by means of various behavior or conduct disturbances. Aims of psychotherapy in children consist of: (1) establishment of contact with the child, (2) release of emotional tension through opportunity for expressing conflicts verbally or through observed play, (3) analysis in terms of the child's emotional conflicts and use of this knowledge in guiding those responsible for his care and

training, (4) simple explanation of the relation of the disorders or symptoms to the emotional conflicts, and (5) assistance through semi-educational approach to adjust to reality.—*C. R. Atwell* (Boston Psychopathic Hospital).

2050. *Quercy, P.* Sur un mécanisme des visions mystiques (l'hallucination métésthésique). (On a mechanism of mystical visions; metesthetic hallucinations.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 546-555.—The cause of visions may be divine, diabolical, or pathological. Their form may be corporal, imaginative, or intellectual. Divine visions, like the others, are usually imaginative. Even the divine visions are hallucinations; they are distinguished from the others by their moral consequences. Not all mystics are hallucinated.—*M. B. Mitchell* (New Hampshire State Hospital).

2051. *Rogues de Fursac, J.* La pathologie dans l'histoire. Psychologie et maladies d'Alphonse-Louis du Plessis de Richelieu. (Pathology in history. Psychology and maladies of Alphonse-Louis du Plessis de Richelieu.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 537-545.—*M. B. Mitchell* (New Hampshire State Hospital).

2052. *Schiller, P. v.* Die triebpsychologischen Wurzeln der sogenannten nervösen Zustände. (Psychological drives as roots of so-called nervous conditions.) *Ber. Kongr. dsch. Ges. Psychol.*, Tübingen, 1935, 14, 305-306.—*H. Beaumont* (Kentucky).

2053. *Skottowe, I., & Lockwood, M. R.* The fate of 150 psychiatric out-patients. *J. ment. Sci.*, 1935, 81, 502-508.—Follow-up of 150 consecutive psychiatric out-patients showed 68 suitable for active treatment who had been willing to follow advice. After periods up to 21 months it was found that 50 of these were recovered or much improved. Psychological treatment was effective in 11 of 13 cases of psychoneurosis and early psychosis. Of the 32 cases requiring mental hospital treatment, 24 were discharged as recovered or much improved. Treatment is more effective in these cases than in the average of mental hospital admissions, although the groups are clinically similar. Further study aimed at explanation of this fact is recommended.—*C. J. Herrick* (Pennsylvania).

2054. *Störting, G. E.* Zur Psychopathologie und Klinik der Angstzustände. (The psychopathology and clinical manifestations of anxiety states.) *Abh. Neurol. Psychiat. Psychol.*, 1934, No. 72. Pp. 117.—*R. R. Willoughby* (Clark).

2055. *Truesdell, L. E.* Patients in hospitals for mental disease, 1933. *U. S. Bur. Census Rep.*, 1935. Pp. 140.—*C. M. Louitt* (Indiana).

2056. *Vié, J.* Améliorations survenant chez certains arriérés entre 16 et 25 ans. (Ameliorations taking place in certain feeble-minded patients between the ages of 16 and 25.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 649-658.—While there was not much improvement intellectually, a few feeble-minded patients showed marked improvement in their character disorders, motor abnormalities, enuresis, and epileptic seizures. As a result of this report, a committee was

appointed to investigate the advisability of having the age limit raised for keeping feeble-minded children in the French medico-pedagogical institutions.—*M. B. Mitchell* (New Hampshire State Hospital).

2057. *Washburne, A. C., & Carns, M. L.* Post-operative psychosis. Suggestions for prevention and treatment. *J. nerv. ment. Dis.*, 1935, 82, 508-513.—A discussion of the more probable etiological factors, with symptomatology and therapy, citing five cases and pleading for preoperative psychotherapy.—*C. R. Atwell* (Boston Psychopathic Hospital).

2058. *Wolberg, L. R.* Basal metabolism in manic-depressive psychoses. *Psychiat. Quart.*, 1935, 9, 586-609.—A review of the literature on basal metabolism of psychotic patients with presentation of results on a group of 105 manic-depressive patients. A majority of tests were within normal limits, although the percentage of abnormal readings was greater than one would expect in a similar number of "normal" individuals. In the manic group of 45 cases, 12.8% of the tests were pathologically elevated while 19.3% were pathologically lowered. In the depressed group (54 cases) 4% were elevated, 26% lowered. A general tendency toward minus readings was especially pronounced in the depressed cases. Fluctuations in metabolism were in many cases over a wider range than is considered normal. Severity of the mental reaction appeared to bear little relation to the metabolic rate, as did psychomotor agitation and retardation. The emotions of anxiety and fear were occasionally accompanied by an increased basal metabolism. On the advent of recovery there was a tendency to more normal figures than in readings during the active psychosis. Undernutrition, physical inactivity, endocrine disorders and somatic illness accounted for a very small percentage of abnormal metabolic rates. A great many abnormally elevated readings were associated with increase in muscle tonus, muscular tremors and contractions, and improved nutritional condition. Transitory endocrine abnormalities and depression of neuro-vegetative function were suggested to explain many depressed readings and metabolic fluctuations. A pathologically low metabolic rate is probably normal for a few patients. Average prediction standards are perhaps too high and this factor may account for the tendency to minus readings. It is suggested that the Aub-DuBois standards be reduced 5%. Bibliography.—*C. R. Atwell* (Boston Psychopathic Hospital).

2059. *Wolf, C.* La castration de l'homme pour perversion sexuelle ou délits de moeurs. (Castration of man for sexual perversion or moral offenses.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 402-437.—Cases from the literature of various countries are considered as well as cases studied by the author. Castration has the greatest therapeutic value on idiots, imbeciles, and intelligent men who desire the operation. The effects on the idiots and imbeciles seem as immediate as an amputation. On normal men the results are more varied and gradual. There have been few cases of recidivism among criminals after castration. The libido and potency have usually decreased propor-

tionately, although occasionally one has remained strong while the other diminished. Men castrated between the ages of 25 and 45 have kept their libido more than those operated upon when either younger or older. Castration seems to exercise a curative effect on the force of the sexual desire and potency but only an indirect effect upon perversions. There is little danger from mental disease following castration, but the greatest danger is of depression. Physically there are sometimes changes, such as in the hair, weight, height, skin, and voice. On the whole, socially, the castrates adjusted much better after their operations than before. They may not show much initiative, but have more steadiness in their work.—*M. B. Mitchell* (New Hampshire State Hospital).

2060. Wülfinghoff, W. *Taubstummheit und Schwachsinn.* (Deaf-mutism and feeble-mindedness.) Würzburg: Memminger, 1935. Pp. 15.—*R. R. Willoughby* (Clark).

2061. Zsakó, I., & Jó, J. *A hallucinatio.* (Hallucinations.) In Zsakó, I. [Memorial book (1883-1933) of the asylum for nervous and mental diseases at Angyal-föld]. Budapest: 1933. Pp. 211-323.—I. Introduction. II. Cases: Hallucinations of neurologic and psychiatric patients. Experimental researches with neurotic and psychotic patients. Experiments with sound individuals. Experiments with animals. III. Conclusion of symptoms: (1) Somatic, (2) mental relations of hallucinations. (3) The whole individual and the hallucination. IV. Theories: (1) Somatic, (2) psychic, (3) cortical and psychological, (4) theories of the origin and of the totality of the individual. V. Original view of the problem. (1) Historic evolution of the idea of hallucinations. (2) Illusion, pseudohallucination and hallucination. (3) Final conclusions. Literature. Index of authors.—*P. Ranschburg* (Budapest).

[See also abstracts 1849, 2107, 2129, 2188, 2224, 2250, 2252.]

#### PERSONALITY AND CHARACTER

2062. Ach, N. *Willens- und Charakterbildung.* (The building of will power and character.) *Ber. Kongr. dsch. Ges. Psychol., Tübingen*, 1935, 14, 274-281.—The willingness to accept responsibility is ontogenetically conditioned and depends on constitutional conditions of the function of volition and its consequences, especially the consciousness of freedom. Responsibility includes the identification of the ego as cause of the act with the performer of the act and its consequences. Man is thus ontogenetically enabled to perfect his fate and that of his society. This is also true of the group and the state. The general willingness to assume responsibility is proof of the improvement being made in the German state.—*H. Beaumont* (Kentucky).

2063. Adler, C. A. *The nature of character.* *Int. J. indiv. Psychol.*, 1935, 1, 59-70.—A popular review of A. Adler's fundamental conceptions of personality, using as foils selected statements from

literary and philosophic writers.—*O. N. de Weerd* (Beloit).

2064. Baudouin, C. *Introduction à une science du caractère.* (Introduction to a science of character.) *J. Psychol. norm. path.*, 1935, 32, 402-417.—The author discusses theories of character and personality in terms of three pairs of classifications. First, character is on the one hand innate temperament, including impulses and spontaneous activity, and on the other hand it is the domination and control which we exert on original nature. From the second point of view the meaning of character oscillates between being a simple sum of traits and being a Gestalt or synthesis which is more than the sum of the parts. Third, character can be defined in terms of individuality or in terms of types.—*R. E. Perl* (Columbia).

2065. Baumgarten, F. *Les traits de caractère.* (Character traits.) *Kwart. psychol.*, 1935, 6, 260-274.—A character trait is a constant psychic "direction" determining the active and reactive behavior of man toward his environment. All of these "directions" taken together constitute a whole and present a particular structure which we call character. These character traits are distinct constituents of psychic organization, as are perceptions, thoughts, emotions, etc. The task of distinguishing between the actual existence and the apparent manifestation of a trait is very difficult. There is not a simple relationship of cause and effect between a character trait and behavior, since behavior caused by a particular trait can be modified by other traits or other psychic constituents; character traits also have the quality of manifesting themselves under different forms of behavior.—*T. M. Abel* (Progressive Education Association).

2066. Baumgarten, F. *Les traits de caractère.* (Character traits.) *Riv. Psicol. norm. pat.*, 1935, 31, 179-189.—See X: 2065.—*T. M. Abel* (Progressive Education Association).

2067. Brachfeld, O. *Zwei Beiträge zur Individualpsychologie.* (Two contributions to individual psychology.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 213-215.—(1) The interpreter and individual psychology: The experiences of an official interpreter at Versailles support the individual-psychological position that language ability is not merely a special knowledge of vocabulary and syntax, but involves the individual's integrated experiences in their totality. (2) A dream about three vital problems.—*O. N. de Weerd* (Beloit).

2068. Brachfeld, O. *Krankheit als geistiger Antrieb.* (Illness as a drive to mental activity.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 215-217.—See *Journal of the American Medical Association*, Nov. 10, 1934.—*O. N. de Weerd* (Beloit).

2069. Bräuer, A. *Rembrandt, vom Standpunkt der Individualpsychologie aus gesehen.* (Rembrandt viewed from the standpoint of individual psychology.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 245-256.—Bräuer seeks to show that the basic controlling personality traits in Rembrandt's life and creative activity were rooted in his early childhood experiences. A mother-

child relationship with overprotection, a competitive and repressive relationship with his brothers and his father, and growing out of this a general inability to associate himself with social equals are inferred from the character traits of the adult Rembrandt. His art in its inception as well as in its highest realizations is explained as the expression of overcompensation. Rembrandt's creations of deep shadow and light effects are explained as the expression of experience in the assumed dark childhood home in the old mill.—O. N. de Weerd (Beloit).

2070. Cattell, R. B. *The measurement of interest.* *Character & Pers.*, 1935, 4, 147-169.—The author first cites the sad plight in which we find the study of character. The German intuitive approach is ineffective; the American experimental method has not bridged the gap between the surface qualities amenable to experimentation and the subtler aspects of character sketchily revealed by psychoanalysis; and the English method of factor analysis gives only a broad outline of personality traits such as *w*, *c* and *p*. If Shand and McDougall are correct in assuming that character is the congealing of instinct energy into the channels of acquired sentiments, the experimental study of interests and their development should prove fruitful. Granting the adequacy of this assumption, the author devises and illustrates a form of interest test which he believes has possibilities for future research.—M. O. Wilson (Oklahoma).

2071. Cimbal, W. *Charakterentwicklung des gesunden und nervösen Kindes, ihre Beeinflussung durch Rasse und Erziehung.* (Character development in healthy and nervous children; its relationship to race and education.) Berlin: Urban & Schwarzenberg, 1934. Pp. 280. RM. 4.00.—R. R. Willoughby (Clark).

2072. Clarke, G. *Some character traits of delinquent and normal children in terms of perseveration factor.* *Aust. Coun. educ. Res. Ser.*, 1934, No. 29. Pp. 42. 2s.—A series of tests designed to measure perseveration were given to subjects in the Perth Girls' and Perth Boys' Schools with the object of obtaining results bearing on Pinard's findings. In general the results are in agreement with those of other investigators, the intercorrelations obtained, however, being slightly higher. The standard tests are evaluated and several new ones are shown to justify their inclusion in the battery. Extreme perseverators are shown to have fairly well defined character traits. Extremes of perseveration are associated with opposition to authority. The difficult child is frequently an extreme perseverator or an extreme non-perseverator. Numerous tables and charts are included.—W. E. Walton (Nebraska).

2073. DeSaussure, R. *Les sentiments d'infériorité.* (The sentiments of inferiority.) *Ann. méd.-psychol.*, 1935, 93, Part 2, 556-564.—The sentiments of inferiority arise in infancy from five causes: (1) The child accepts the parents' judgment as final, so if the parents consider a sibling superior in some respect the child thinks he must be inferior. If a parent shows more love to one child, the others may feel they are

inferior. (2) If parents always demand obedience and never allow the child to exercise his own judgment, he grows into an adult who never feels confident to make decisions for himself. The parent should gradually let the child make more decisions for himself and thus learn from experience. The parent should avoid imposing orders which correspond to the desires of the adult but not of the child, and avoid being too arbitrary. (3) In families having more than one child, there may be some jealousies developed, especially of younger children. In families of only one child, the jealousy may be of one parent. (4) The child may develop a sentiment of culpability, which augments the feeling of inferiority. (5) The sentiment of castration growing out of a partial consciousness of sex differences or the threat by unwise parents of castration for masturbation.—M. B. Mitchell (New Hampshire State Hospital).

2074. Johnson, A. P. [Ed.] *The common responses to a new form of the Free Association Test.* *Tech. Rep. Hum. Engng Lab.*, 1935, No. 3. Pp. xii + 18. \$1.00.—In order to study change of personality with age, environment, or experience, a second reliable test form is needed to go with an already accepted measure of personality (Worksample 35 from AB). This report is one of the major statistical steps in the construction of a second form. The ten most common responses to each of the 100 stimulus words is given with their frequencies. A study of those stimulus words which cause delayed responses is proposed.—R. Goldman (Clark).

2075. Lecky, P. *The theory of self-consistency in personnel problems.* *Rep. ann. Mtg Amer. Coll. Person. Ass.*, 1935, 12-19.—The new psychology must be consistent with the new physics and become an interpretive rather than a descriptive science. The personality is conceived of as a system of ideas. All ideas in such a system must be felt to be consistent with one another, as well as with the idea of oneself which serves as the nucleus. New ideas not consistent with those already accepted are resisted and rejected. Students deficient in academic subjects resist such learning because it would be inconsistent with their self-conception. Remedy lies in removing resistance; social and occupational maladjustments, marriage problems, laziness, lack of concentration, etc., are due to resistances concealed by rationalization. All behavior has the single motive of maintaining individual integrity and self-consistency. The technique employed is compared with Freudian and Adlerian methods.—P. Lecky (Columbia).

2076. Noszlopi, L. v. *A törtető.* (The pushing person.) *Társadalomtudomány*, 1935, 2-3, 101-113.—Struggle for life means ambition to become greater than others in not only vital, but also social behavior. Pushing ambition is an extreme character type; material goods are the subjects' chief concern. These persons are narrow-minded people of the middle classes, and may be classified according to the motives, aims, instruments and success of their pushing. There are transitions from pushing to ambition, to the feeling of inferiority, to envy, rivalry, jealousy, resentment.

Feeling of inferiority is combined with passivity. The successful pusher is not able to be at home in the higher rank he has reached because of his mental emptiness. His only satisfaction is to be one step ahead of the performances of others; but in gaining one success after another he is sacrificing his own life, i.e., his ambitions are bionegative.—P. Ranschburg (Budapest).

2077. Pfahler, G. **Rassenkunde und Erbcharakterologie.** (Racial psychology and the characterology of heredity.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 104-108.—Racial psychology, which attempts to determine the mental characteristics of each race, and characterology, which aims to find the basic hereditary forms of each individual's mental life, agree that to each bodily type belongs a definite type of mentality. The author could establish the following facts: (1) in random groups of school children in various parts of Germany hereditary characteristics are noticeable; (2) under the most diverging experimental conditions the same subjects persisted in showing the same characteristics; (3) subjects of similar heredity showed similar performance regardless of differences in sex, age and racial extraction.—H. Beaumont (Kentucky).

2078. Sachs, H. **Zur Menschenkenntnis.** (Knowledge of people.) Vienna: Int. Psychoanal. Verl., 1936. Pp. 122. RM. 2.20.—R. R. Willoughby (Clark).

2079. Schuster, W. **Pädagogische Kontakttypen.** (The typical instructional groups.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 221-245.—Two marked attitudes toward school work are revealed by children. The self-centered (I-type) are subjective in their approach; the well-socialized (we-type) are objective. These fundamental attitudes are met with quite consistently from whatever aspect the school activity be regarded, whether mental, emotional, or purposive. Such an analysis is recommended as helping the teacher to a better comprehension of effective classroom methods with individual pupils.—O. N. de Weerdt (Beloit).

2080. Shen, E. C., & Liu, C. C. [The norm of Bernreuter's personality inventory in China.] *Educ. & Voc. (Chinese)*, 1935, Ser. No. 161, 11-13.—A Chinese version of Bernreuter's personality inventory in the form of a questionnaire was sent out and a total of 405 replies was obtained, of which 204 copies came from the boys and 201 copies from the girls, most of them being high-school students at Hang-chow. The scores of each of the four measures (neurotic tendency, self-sufficiency, introversion-extraversion, and dominance-submission) for each of the two sexes were treated separately and their respective norms were obtained according to their percentile positions. For the first three measures (B1-N, B2-S, and B3-I) the differences in scores between the two sexes are very slight and in each case their norms may be used interchangeably. For the measure of B4-D, however, the difference in scores of the two sexes is marked and their norms probably need to be revised. The authors also point out that

when these norms are applied to people other than high-school students, and especially when they belong to different age groups, some reservations must be made.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2081. Vialle, L. **Prestige de la douleur.** (The prestige of sorrow.) *J. Psychol. norm. path.*, 1935, 32, 355-401.—This article is a discussion of the cult of sorrow. It explains why we enjoy being sad, salvation through suffering, the part pain plays in human development, the prestige gained by an appearance of suffering, and similar problems.—R. E. Perl (Columbia).

2082. Wenzl, A. **Grundlinien zur Typologie der sozialen Haltung.** (Foundations of a typology of social attitude.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 122-124.—H. Beaumont (Kentucky).

2083. White, J. H. **Values transcending evaluation.** *Ind. Univ. Sch. Educ. Bull.*, 1935, Vol. 12, No. 1, 78-82.—"A personality has two sets of elements: the apparent or surface elements and the ones that are central and more fundamental." Rapid advance has been made in the measurement of the surface elements, but the author feels the second group are, and will continue to be, unmeasurable.—C. M. Louttit (Indiana).

[See also abstracts 1798, 1860, 1905, 1974, 1978, 1980, 1989, 2034, 2090, 2094, 2115, 2117, 2118, 2122, 2127, 2138, 2166, 2211, 2232.]

#### SOCIAL FUNCTIONS OF THE INDIVIDUAL

2084. Adler, A. **The prevention of delinquency.** *Int. J. indiv. Psychol.*, 1935, 1, 3-13.—(Also in *Int. Z. Indiv.-Psychol.*, 1935, 13, 197-206.) Delinquency is an aspect of personality organization and therefore of motivation in social adjustments. Attempted prevention and correction are concerned with teaching the subject to recognize the goals toward which he is striving.—O. N. de Weerdt (Beloit).

2085. Alt, M. **Eine Darstellung der Typen des musikalischen Geniessens und Wertens beim Jugendlichen und ihrer pädagogischen Bedeutung.** (An analysis of the types of musical enjoyment and evaluation in adolescents, and their pedagogical significance.) Leipzig: Kistner & Siegel, 1935. Pp. 106.—R. R. Willoughby (Clark).

2086. Argow, W. W. **A criminal-liability index for predicting possibility of rehabilitation.** *J. crim. Law Criminal.*, 1935, 26, 561-577.—The case records of 563 inmates of Connecticut jails were studied with reference to the items in their histories which indicated the likelihood of rehabilitation. The CLI is based upon the ratio of the percentage of known first offenders for each item to the percentage of known recidivists for each item.—L. Ackerson (Institute for Juvenile Research).

2087. Armstrong, C. P., Achilles, E. M., & Sacks, M. J. **Reaction of Puerto Rican children in New York City to psychological tests.** New York: Chamber of Commerce, 1935. Pp. 9.—The Army individual

performance test and the Otis test of general ability were given to unselected samplings of Puerto Rican children aged 9-15 years in grades 4, 5, and 6. Their inferiority to the control groups in ability was marked. It is concluded not only that a serious local condition exists in New York City as a result of the presence of the Puerto Ricans, but also that the further introduction of this element, should the island become a state in the federal union, "portends the development of grave consequences, unless steps are taken to check the inflow of surplus populations."—R. Goldman (Clark).

2088. Baby, J., Cohen, M., Friedmann, G., Langevin, R., Maublanc, R., Mineur, H., Parain, C., Prentant, M., Sauvageot, A., & Wallon, H. *A la lumière du marxisme.* (In the light of Marxism.) Paris: Editions sociales internationales, 1935. Pp. 312.—M. H. Piéron (Sorbonne).

2089. Bayer, R. *La signification psychologique des modalités du beau.* (The psychological significance of the modalities of beauty.) *J. Psychol. norm. path.*, 1935, 32, 420-433.—Esthetics is discussed with special emphasis on the topic of movement and the concept of grace. The first conclusion is that an object of art is, above all, rhythmic. Second, the origin of the esthetic emotion is in its correspondence to the emotion accompanying authentic action. The third conclusion is that esthetic pleasure is not of the same sort as most pleasure or sorrow because the technical aspects can never be eliminated in the realm of art.—R. E. Perl (Columbia).

2090. Belo, J. *The Balinese temper.* *Character & Pers.*, 1935, 4, 120-146.—The people of Bali strive for perfect poise and balance in every posture, gait and gesture; attempt to maintain orientation both spatially and socially; seek perfect fitness of speech, posture and manner in all situations; and are well developed emotionally and expressive of their emotions. Although there are occasional deviants, most individuals conform to tradition to a high degree. The behavior of the Balinese is characterized by ease and relaxation. They differ from most peoples in that they work in relaxation and experience strain and tension only in their recreation. Their freedom and relaxation seem to come from the immutability of their laws of conduct, the rightness of which is never doubted. The only responsibility of the individual is obedience to these laws.—M. O. Wilson (Oklahoma).

2091. Benedetti, P. *Sul valore di alcuni rapporti antropometrici come indici della costituzione nelle indagini collettive.* (The value of certain anthropometric relations as indications of constitution in group investigations.) *Endocr. Pat. cost.*, 1933, 8, 107-138; 222-237.—R. R. Willoughby (Clark).

2092. Blackwood, B. *Both sides of Buka Passage.* New York: Oxford Univ. Press, 1935. Pp. 624. \$12.00.—Ethnographical and anthropological study of conditions among the natives of the northwest Solomon Islands, covering social, sexual, and economical questions.—R. R. Willoughby (Clark).

2093. Blanton, S., & Blanton, M. G. *For stutterers.* New York: Appleton-Century, 1936. Pp. xi + 191. \$2.00.—The book sets forth the thesis that stuttering originates in and is maintained by emotional disturbances, principally unconscious. Its nineteen chapters may be divided roughly into three groups, the first dealing with such basic topics as conscience, anxiety, emotional patterns, the family, and theories of stuttering; the second with the theories of etiology and treatment propounded in the present work; and the third with the roles of parents, teacher, public, and the stutterer himself in treatment. There is an index.—R. R. Willoughby (Clark).

2094. Bleuler, M., & Bleuler, R. *Rorschach's ink-blot test and racial psychology: mental peculiarities of Moroccans.* *Character & Pers.*, 1935, 4, 97-114.—Moroccans react to the Rorschach ink-blot test quite differently from Europeans. They show a marked preference for small-detail responses; lose the whole perspective while becoming engrossed in some minor pattern; lack responsiveness to symmetry; and have extreme difficulty in interpreting pictures. These differences seem to be due to peculiarities in their racial history and not to mental inferiority. It is concluded that this test is a valuable tool with which to gauge the character of a foreign people.—M. O. Wilson (Oklahoma).

2095. Bloomfield, L. *Linguistic aspects of science.* *Phil. Sci.*, 1935, 2, 499-517.—The forms of the scientist's speech are peculiar in vocabulary and syntax—so much so that most members of his speech-community do not understand them. His vocabulary and structure are highly selective, by reason of which fact he is able to express his generalizations in very much abridged ways which only the initiated can follow. But these forms have the virtue of arousing the same response with a very high degree of uniformity among those persons who understand them. In this article the author attempts, in a small way, to analyze some of the elements in this "technical dialect."—C. C. Peters (Pennsylvania State).

2096. Bryngelson, B. *A method of stuttering.* *J. abnorm. soc. Psychol.*, 1935, 30, 194-198.—Not all stutterers need mental-hygiene therapy, because they are adjusted to their stuttering. A therapy suggested for stuttering is voluntary stuttering, which has as its aims "to adjust the stutterer to his speech spasms, and to enable him to gain more control over his speech." Success in voluntary stuttering brings confidence, assurance, and successful communication to the foreground.—C. H. Johnson (Boston Psychopathic Hospital).

2097. Cairns, H. *Law as a social science.* *Phil. Sci.*, 1935, 2, 484-498.—At present legal study does not exhibit the characteristics of a social science; it is a technology. But as a technology it is overlooking a set of problems which must be solved before we can ever have a finished theory of law or a sound applied legal science. Before we can realize the possibility of a science of law the present practically exclusive emphasis upon legal reform must be qualified so as to make room for a study of the cultural

aspects of law, such as: the place of law and custom in society, the nature of sanctions, the basis of authority, the character of primitive law, and the application of the social codes to individual conduct. The author does not attempt in this article to deal with the question of what method law will apply as a social science, believing that no exclusive position in regard to this is warranted by our present knowledge.—C. C. Peters (Pennsylvania State).

2098. Carter, A. C., & Giardini, G. I. Reliability of psychological prognosis in the Western Penitentiary of Pennsylvania. *J. crim. Law Criminol.*, 1935, 26, 556-560.—A group of 120 prisoners who had been on parole up to 27 months were rated on a five-category schedule of probable success on parole. These prognostications were compared with a corresponding five-category schedule based upon the parolees' actual success after release as determined from the records of the State Parole Bureau. In 37.5% the predictions by the psychologists were corroborated by actual parole reports, and in 39.2% the predictions deviated by one category from the actual success, while in only 23.3% was there a wider divergence between predicted and actual success.—L. Ackerson (Institute for Juvenile Research).

2099. Diserens, C. M., & Wood, T. W. The concept of economic security among primitive peoples. *J. soc. Psychol.*, 1935, 6, 357-368.—Psychologists should recognize the fact of a fundamental sense of security representing an equilibrium in the relation of an organism to its environment, a perception of conditions optimal for its survival in the Darwinian sense. Such a sense of security has its behavioristic counterpart in the efforts of the organism to survive, its economic activity. Rational man has invented many mechanisms to add to his sense of security. The writer discusses as typical the development of religion and magic on the one hand and the family on the other, pointing out that each has been developed because it contributes to economic security. "Primitive communism, no doubt, represents the effort of the individual to realize economic security through a solidarity with the whole (society)."—E. B. Newman (Swarthmore).

2100. Eckstein, L. Die erzieherischen Kräfte der Familie. (The educational forces of the family.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 253.—The average family of today is no longer in a position to train and develop the individual sufficiently. But it alone is able to arouse him affectively and so prepare him for the sort of development which society has to give him.—H. Beaumont (Kentucky).

2101. Forsyth, D. Psychology and religion. London: Watts, 1935. Pp. ix + 221. 7/6.—A study of the inevitable conflict between science and religion, written by a psychoanalyst.—F. C. Bartlett (Cambridge, England).

2102. Frank, B., & Cleland, P. S. The physical capacity of the young criminal. *J. crim. Law Criminol.*, 1935, 26, 578-586.—There appeared to be no significant relationship between physical capacity and

mental level, type of crime, or number of institutional commitments.—L. Ackerson (Institute for Juvenile Research).

2103. Giese, F. Lebensraum und Lebensleistung. (Environment and accomplishment.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 173-199.—The author discusses the relationship between a number of environmental factors and individual accomplishment and finds the following facts in the literature: (1) geographical location has a significant influence on accomplishment; (2) small towns and villages produce more outstanding professional people than do large cities; (3) family influence and background are fundamental in determining an individual's chance of contributing something outstanding to society; (4) the individual's occupation and training are of great importance in this respect.—H. Beaumont (Kentucky).

2104. Goetsch, W. R. The effect of early handwriting instruction. *Elem. Sch. J.*, 1935, 36, 290-298.—The compositions of children in grades 3-5 who had been taught manuscript writing in grades 1 and 2 (and cursive writing thereafter) were compared with those of children who had been instructed consistently in cursive writing. The writer was unable, in general, to differentiate between the groups on the basis of speed of writing, quality of handwriting, and quality of composition.—P. A. Witty (Northwestern).

2105. Gottschaldt, K. Zur psychischen Dynamik des Gemeinschaftsleben. (Psychodynamics of social life.) *Ber. Kongr. dtsh. Ges. Psychol.*, Tübingen, 1935, 14, 237-246.—H. Beaumont (Kentucky).

2106. Gummersbach, H. Der Selbstmord. (Suicide.) *Krim. Mh.*, 1935, 9, 268-272.—A discussion from the legal standpoint of the methods used, the reasons given, and the psychological causes. Among women, poison and drowning predominate; among men, shooting and hanging. Dramatic methods and love fantasies are typical of hysteria, while psychotics often choose gruesome means, symbolic of their sense of guilt. The true reason for the act cannot usually be determined from the person's ante mortem statement, as this often assigns trivial causes or is dictated by vanity or revenge. Indecision is common, and suggestion plays a large part in multiple suicides. The psychological cause, even in "reasoned" suicide, is anxiety in confronting life, and the immediate occasion is furnished by a variety of stresses. Alcohol is often the last straw, as it increases the depression, anxiety, obsessions, and feeling of insufficiency, confuses thought, and removes inhibitions. The parallelism between the curve of suicides and of offenses against morality, both reaching their peak in the spring, is probably due to the same factor, the increase of the sexual urge.—M. E. Morse (Baltimore).

2107. Hall, M. E. Mental health work in the Illinois reformatory for women. *Psychol. Exch.*, 1935, 4, 62-63.—Mental health work is carried on by a staff of four persons—a full time physician and psychiatric social worker, a part time psychiatrist and psychologist. The duties of each individual are outlined.—H. Cisney (Worcester State Hospital).

2108. Hunt, A. M. **A study of the relative value of certain ideals.** *J. abnorm. soc. Psychol.*, 1935, 30, 222-228.—A scale of values for 17 groups of ideals was made from the opinions of 500 members of a community. This scale is considered valid only for this community, which, however, appears to be an average one. The married couples showed a greater correlation of opinion than did pairs chosen at random. The length of married life apparently had no influence upon the similarity of opinions of husband and wife. The scales for different groups were all similar in their choice for the four most important ideals, and also for the three least important.—C. H. Johnson (Boston Psychopathic Hospital).

2109. Huth, A. **Die typisch verschiedene soziale Haltung der in Deutschland vorkommenden Rassen.** (Typical differences in social attitude of the races of Germany.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 127-128.—Individuals and groups may possess their various characteristics to four extents: exaggerated and biologically detrimental; strong and biologically advantageous; weak and biologically advantageous; too weak and biologically detrimental. In the order given these are typical of four racial groups in Germany, respectively: western, Nordic, Dinaric, eastern. Nordic and Dinaric are intimately related; western and eastern groups differ extremely. These differences are carried out in a number of general characteristics.—H. Beaumont (Kentucky).

2110. Israeli, N. **Students' wishes concerning future great advances in school and society.** *Brooklyn Teacher*, 1935, 15, 11-12.—Graduate students at Yale and Columbia answered a questionnaire regarding the advances desired by them in international relations, national government, education, science (physics, biology, psychology). The wishes were quite practical and applicable to the present situations; the outlook of the students was "rather representative of the American outlook upon the future in the early part of 1932." The study was conducted in 1930-31.—R. Goldman (Clark).

2111. Jaensch, E. **Gemeinschaftsbildung und Staatsauffassung aus dem Gesichtspunkt psychologischer Typenforschung.** (Social structure and the concept of the state from the viewpoint of psychological investigations of types.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 145-172.—Until recently culture was divided into two parts: an inorganic, materialistic civilization and an idealistic, purely mental concept. Man as a living being was ignored. This situation has been ended by the German reorganization. Science can contribute greatly to the social structure if it remembers that the whole human being is its domain, not merely the intellect. Special emphasis should be placed on man's volitional processes. In its most fruitful accomplishments, science has never deviated from this viewpoint.—H. Beaumont (Kentucky).

2112. Jaensch, E. **Das philosophische Wertproblem im besonderen Hinblick auf die deutsche Bewegung und die Kunst.** (The philosophical problem of values with special reference to the Ger-

man movement and art.) *Neue psychol. Stud.*, 1934, 12, No. 2, 1-22.—The present time is one of transition. The departing epoch was characterized by its preoccupation largely with a technological civilization and to a smaller extent with an interest in the supernatural. The coming epoch, on the other hand, is directed toward life itself. As complements to a positivistic science we have seen the rise of the transcendental philosophies and the doctrine of unreal values. But now we have recognized that the real values are those of a healthy culture, depending largely upon the undisturbed development of the harmonious totality of a people's life. Here the artist is able to live in the same inner world as the other individuals.—K. F. Muenzinger (Colorado).

2113. Johnson, A. P. [Ed.] **First revision of Form E of the English Vocabulary Test, Worksample 95.** *Tech. Rep. Hum. Engng Lab.*, 1935, No. 5. Pp. viii + 69. \$1.00.—The report gives the detailed steps in the construction of Form EA, based on a statistical analysis of the results obtained from Form E, which in turn is based on preceding revisions of the Inglis Tests of English Vocabulary. The "test measures acquired knowledge, dependent to a large extent on school background." Vocabulary has been found to be the most reliable single measure for identifying success. Four laws regarding the learning of vocabulary are given. There are three appendices.—R. Goldman (Clark).

2114. Kadner, S. **Rasse und Humor.** (Race and humor.) München: J. F. Lehmanns, 1936. Pp. 236. RM. 3.80.—R. R. Willoughby (Clark).

2115. Katz, D., & Braly, K. W. **Racial prejudice and racial stereotypes.** *J. abnorm. soc. Psychol.*, 1935, 30, 175-193.—Ten ethnic groups were placed in rank order by 60 Princeton students on the basis of preference for association with their members. The ranking was similar to the results reported by other investigators. Minor exceptions occurred in the case of the Jews and Japanese, who were placed somewhat lower and higher, respectively, than in other studies. A change in instructions designed to elicit private or personal responses as against public attitudes had a significant effect only in the case of the negroes, who were placed a rank higher in private than in public preferences. Students showed the greatest agreement in ranking the Americans, English, and Germans for both public and private preferences. The least agreement in public preferences occurred for the Jews, Japanese, and Chinese, and in private preferences for the negroes, Jews, and Chinese. A list of 84 traits given as the typical characteristics of the ten nationalities by a group of students was rated by another group of students on the basis of their desirability as associates. From these ratings scores were assigned to the ten nationalities, the relative weights of which agreed closely with the preferential private and public rank orders.—C. H. Johnson (Boston Psychopathic Hospital).

2116. Kistler, K. **Sprachgestörte Kinder.** (Children with speech disturbances.) *Unsere Sorgenkind.*, 1934, No. 3. Pp. 36.—R. R. Willoughby (Clark).

**2117. Klages, L.** *Handschrift und Charakter.* (Handwriting and character.) (16th ed.) Leipzig: J. A. Barth, 1936. Pp. 260. RM. 8.—*R. R. Wiloughby* (Clark).

**2118. Knower, F. H.** Experimental studies of changes in attitudes: I. A study of the effect of oral argument on changes of attitude. *J. soc. Psychol.*, 1935, 6, 315-347.—To test the effectiveness of oral arguments on attitudes, the Smith-Thurstone scale was used to measure attitudes toward prohibition. The retest results with the total experimental group of 607 subjects who were exposed to some form of oral argument were compared with the retest results for 300 control subjects. About 25% of the total group showed changes in the expected direction greater than 3 times the standard error of the attitude scale. Various factors bearing on such changes were varied, such as sex of the speaker or listener, logical or persuasive character of the speeches, direction of the change, etc. Arguments presented in face-to-face situations proved to be more effective than those presented to a group.—*E. B. Newman* (Swarthmore).

**2119. Krueger, F.** *Psychologie des Gemeinschaftslebens.* (Social psychology.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 5-62.—Even though Wundt supplemented his individual psychology by a study of social and racial groups, most psychologists have neglected until recently to emphasize this aspect sufficiently. Yet it is essential for a proper understanding of life. Foremost among the problems of social psychology is that of the family, also those of the school environment and of various occupations. Among the last mentioned, studies of military occupations have proven most fruitful. In the creation of a new civilization, a process which is now going on in Germany, it is essential that a thorough study be made of man in his social environment. More than ever before psychologists must stand together and work to further this common cause.—*H. Beaumont* (Kentucky).

**2120. Kutzner, O.** Die Struktur der Familie in ihrer Bedeutung für die Erwachsenen. (Family structure in its significance for adults.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 254-255.—Children often cause parents to become aware of the meaning of their existence. Parents show more often a healthy optimism, a positive attitude towards life, which is necessary for national progress, than do childless adults. The intimate contact of the family minimizes friction between generations. The family gives parents a chance for self-education which would otherwise be neglected.—*H. Beaumont* (Kentucky).

**2121. Lehmann, F. R.** Die Erziehung bei schriftlosen Völkern. (Education among peoples without written language.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 250-252.—Imitation plays the leading part in education among peoples who have no written language. It has helped to build tradition, which is emphasized to such an extent that society progresses extremely slowly. On the other hand the individual develops in a rapid tempo, which results in premature maturity and shortened period of youth.

In connection with the overemphasis on tradition this leads to a premature hardening of mental plasticity.—*H. Beaumont* (Kentucky).

**2122. Lentz, T. F., & others.** C-R opinonaire (conservatism-radicalism). St. Louis: Char. Res. Inst. Wash. Univ., 1935. Pp. 4.—The opinonaire is divided into two forms, J and K, each containing 60 items. The items used are the best ones from the preceding issues of the scale. Percentile ratings based on scores of 580 college students are available. The predicted reliability for J and K combined is .93. A "minority-mindedness" score can also be obtained.—*R. Goldman* (Clark).

**2123. Lersch, P.** Grundformen mitmenschlicher Einstellung. (Fundamental forms of social feeling.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 119-122.—*H. Beaumont* (Kentucky).

**2124. Lévy, J. M.** L'écriture en miroir des petits écoliers. (Mirror writing of school children.) *J. Psychol. norm. path.*, 1935, 32, 443-454.—Children in kindergarten and in the first and second grades of elementary school were assigned the task of copying letters and signs which were presented in natural and in reversed and inverted positions. These children came from bilingual schools where Hebrew (written from right to left) as well as Bulgarian (written from left to right) was taught. The results show that mirror writing is not to be explained by a constitutional predilection of the arm to move toward the body or away from it. The factors which determine the orientation of a sign are the position in which the observer is seated and the angle which his body makes with the table or the paper where the letter or sign is begun, and its distance from the preceding letter. Errors seem to be as numerous in the simplest figures as in the more difficult ones.—*R. E. Perl* (Columbia).

**2125. Lippert, E.** Zur Psychologie des Führers in der alten und in der neuen Jugendbewegung. (The psychology of the leader in the old and in the new youth movement.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 231-232.—The leader in the old youth movement was mentally and socially an outsider and untrained. In the new youth movement, the reverse is true. Consequently, in the new movement there is a more painless procedure of adjustment to adult life because youth groups and adults are fired equally with the idea of national socialism.—*H. Beaumont* (Kentucky).

**2126. Logden, G. E., & Alper, B. S.** Survey of juvenile probation in 65 counties of Pennsylvania. *J. crim. Law Criminol.*, 1935, 26, 338-355.—Three pages of detailed recommendations are given.—*L. Ackerson* (Institute for Juvenile Research).

**2127. Mall, G. D.** Wirkungen der Musik auf verschiedene Persönlichkeitstypen. (Effects of music on different types of personality.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 310-314.—*H. Beaumont* (Kentucky).

**2128. Mayer, J.** The techniques, basic concepts, and preconceptions of science and their relation to social study. *Phil. Sci.*, 1935, 2, 431-483.—In its

early stages any field of knowledge that attempts to organize itself scientifically must define its relation to other recognized sciences, discover its basic concepts, clear away some long-standing misconceptions, and utilize and develop tools and techniques provided by the sciences already organized. As it develops it will come to have to a larger extent its own unique methodology, but it will never be wholly independent of the other basic sciences. The social sciences must draw especially heavily upon psychology and biology, but also upon such other basic sciences as geology, the physical sciences, and mathematics. Although the author does not disparage statistical methods for the social sciences, he gives them a secondary place. The bulk of the space in this article is given to a summary of the 52 analyses provided in *Methods in Social Science*, edited by S. A. Rice, as examples of the achievements and the methodology of the social sciences up to the present. The author concludes that "present-day methodology in the social studies is developing in a consistent and constructive manner." —C. C. Peters (Pennsylvania State).

2129. McGEE, R. A. The educator's viewpoint of psychiatric service in a penal institution. *Publ. Hlth Rep., Wash.*, 1935, 50, 21-24.—Much of the value of individual study of prisoners is lost because of a lack of understanding cooperation between various departments dealing with prisoners.—C. M. Louitt (Indiana).

2130. Millardet, G. Dentales et dentition dans les landes; essai de phonétique et de physiologie comparées. (Dentals and dentition in the provinces. Essay on phonetics and comparative physiology.) *J. Psychol. norm. path.*, 1935, 32, 338-354.—It has been demonstrated that the two types of language research, human morphology and phonetics, are very closely allied. The author attempts to discover the relation between pronunciation and dentition in the different French provinces. He is not interested in individual differences, but applies the geographic method, using maps of the distribution of good and faulty dentition based on the distribution of exemption from active military service due to bad teeth. He does not find that bad teeth necessarily go with faulty pronunciation, and explains these negative findings by the fact that the teeth are only the passive organs of speech. When a difficulty in these passive organs appears, the active organs, such as the tongue, are quick to make compensatory movements to safeguard the general timbre and pronunciation.—R. E. Perl (Columbia).

2131. Molony, W. O. Nationality and the peace treaties. London: Allen & Unwin, 1934. Pp. 278. 7/6.—F. C. Bartlett (Cambridge, England).

2132. Murray, R. S. E. The differential aspect of semantic component in relation to psychiatry. *J. nerv. ment. Dis.*, 1935, 82, 525-531.—Our behavior reaction to language may be styled a semantic reaction. These semantic reactions distort the mentality of our children, chiefly through their mimicry of their elders. We should evaluate all semantic reactions according to the modern principles of the exact sci-

ences, uncompromisingly reject all ideas based on erroneous semantic reactions and therefore productive of discord and disease, establish a recast educational system for our children looking to the complete eradication of the fear complex, and expose all adult infantilism.—C. R. Atwell (Boston Psychopathic Hospital).

2133. Opedal, L. E. Analysis of the earliest memory of a delinquent. *Int. J. indiv. Psychol.*, 1935, 1, 52-58.—A report of a typical case of delinquency. The analysis consists of reading interpretations of subsequent behavior traits into the memory studied.—O. N. de Weerdt (Beloit).

2134. Pan, S. [A study in esthetic judgment: the influence of familiarity.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 1, No. 2. Pp. 10.—This experiment is designed to study the influence of familiarity upon esthetic judgment. The materials used were a pair of the design of a lamp and a pair of the design of a bowl, both being colored landscape paintings, adapted from a certain picture book. These were cut and pasted on white cardboards, and designated as materials A<sub>1</sub>, A<sub>2</sub>, B<sub>1</sub>, and B<sub>2</sub>. The subjects used were 24 elementary-school pupils, whose ages ranged from 10 years 1 month to 14½ years old, and who were divided into 4 groups of 6 persons each. They were first required to familiarize themselves with one picture of each pair. The subjects of group I were to familiarize themselves with material A<sub>1</sub>; group II, material A<sub>2</sub>; group III, material B<sub>1</sub>; and group IV, material B<sub>2</sub>. The familiarization, which included both scrutiny (once) and copying (three times) was given once a day for 4 days to 2 subjects at a time, each from a group using different material (e.g., subjects from group I and group III, or from group II and group IV). Immediately after the 4th familiarization, each subject was shown individually another (unfamiliarized) picture of the same pair and required to compare and judge which of the two pictures was more beautiful. It was found that all subjects except one in group III considered the unfamiliarized picture of the pair to be more beautiful. Furthermore, 9 out of the 10 subjects who were tested again at the end of 2 weeks after the 4th familiarization still held the same opinion. However, there were only 4 of the same 10 subjects who still held the same opinion when tested once more at the end of 10 weeks after the 4th familiarization. These results show quite clearly that familiarization influences esthetic judgment, but the effect may be lost in the course of time.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2135. Penniman, T. K. A hundred years of anthropology. London: Duckworth, 1935. Pp. 400. 15/-.—A survey arranged under the general headings: the formulary period (before 1835); the convergent period (c. 1835-1859); the constructive period (1859-1900); the critical period (1900-1935); and the future. The author is throughout aware of the importance of psychological contributions to anthropology, and gives a good summary account of many relevant psychological and physiological investigations.—F. C. Bartlett (Cambridge, England).

**2136. Phillips, M.** The development of social and political sentiments in women. *Brit. J. educ. Psychol.*, 1935, 5, 266-298.—A questionnaire calling for accounts of the growth of a strong interest or sentiment produced twenty documents which when analyzed indicate that any society which satisfies the need of the individual for feeling himself necessary to others tends to become the nucleus for a strong sentiment. Sentiments formed for one individual by another are normally extended to the former's interests, often in the form of social and political sentiments. Sentiments for small societies will be extended to larger ones only when certain conditions as to resemblance are fulfilled. Intellectual and esthetic interest directed to human affairs enters into the composition of many sentiments; altruistic impulses enter similarly, though less generally. Schools and formal education may take advantage of these factors, but can seldom compete with early home influences. Appendices give condensed forms of the original statements.—*K. M. Cowdry* (Stanford).

**2137. Rashevsky, N.** Outline of a mathematical theory of human relations. *Phil. Sci.*, 1935, 2, 413-430.—This article follows three earlier ones in the same journal in which the author outlines a mathematical theory of biology. The present article does not attempt to establish any new "laws" or "relations" which may be claimed to be actually in existence, but merely attempts "to build up a mathematical system describing possible interrelations between the individuals of a group." Beginning with definitions and postulates, he expresses in mathematical formulae, mostly integral equations, the totality of outcomes that would be possible and the degree of their several probabilities. It is a schema into which an actual mathematical social science might some day conceivably be made to fit, just as Einstein's discovery of the actual geometry of the real universe fitted into the abstract structure of Riemann's geometry.—*C. C. Peters* (Pennsylvania State).

**2138. Roucek, J. S.** Social attitudes of the soldier in war time. *J. abnorm. soc. Psychol.*, 1935, 30, 164-174.—Passionate and consuming motives are not the original incentives to enlistment. Once in the army, the soldier finds out that the military life is a hard one. But he still feels that he is "doing his bit," and that the experiment is worth while regardless of all the unpleasant features. He lives for the day when he will go "over there." With the arrival at the front, there is at first a reckless curiosity, but the intensity of fear becomes focused into the strife for self-preservation. Most soldiers become fatalists, because their experiences negate the idea they had of God and goodness. Contrary to popular conception, the average soldier does not hate his enemy. When a soldier is on leave of absence, all his civilian scruples look insignificant to him. This is his moment of freedom and perhaps his last chance to enjoy life. Suddenly the war is at an end and the soldier returns home much grayer, older, and more critical of the conditions at home.—*C. H. Johnson* (Boston Psychopathic Hospital).

**2139. Rowe, E. C.** A case of educational futility. *J. abnorm. soc. Psychol.*, 1935, 30, 237-255.—The case is of a 15-year-old boy who murdered one of the women teachers in his village school after she refused him sexual intercourse. His social development contained few indices to the personality that was to emerge. The criticism is made that the school failed to recognize this boy as a variant and to adjust itself to his needs.—*C. H. Johnson* (Boston Psychopathic Hospital).

**2140. Salaw, H.** Latente Kriminalität. (Latent criminality.) *Krim. Mh.*, 1935, 9, 249-252.—A fundamental principle of the penology of the future is extension of jurisdiction and power of full punishment from the act to its subjective aspect, which in fact will be the chief point of attack. Criminal fantasies are the beginnings of every crime. If a man lives in such an atmosphere his psychic tension rises to an obsession and, given a slight occasion, the step to manifest criminality occurs almost instantaneously and unconsciously. The psychological and ethical situations are the same in both stages. This principle is incorporated in the National-Socialistic penal code. Furthermore, an act is punishable, even though not strictly illegal, if it is contrary to popular opinion. A questionable act is to be investigated not simply factually, but especially in regard to the criminal will and, of crucial importance, as to whether it is morally objectionable. Formerly, under the domination of individualism, the criminal's personality and his social and psychological environment were the determining factors; in the future, his latent criminality, estimated in accordance with the healthy moral viewpoint of the people, will decide his punishment.—*M. E. Morse* (Baltimore).

**2141. Sanford, J. W.** The administrator's viewpoint of psychiatric service in a correctional institution. *Publ. Hlth Rep., Wash.*, 1935, 50, 79-83.—*C. M. Louttit* (Indiana).

**2142. Sanford, R. N.** Psychological work at Massachusetts prison colony. *Psychol. Exch.*, 1935, 4, 59-61.—The direction of the psychological work at the Norfolk prison colony, Norfolk, Massachusetts is schematically reviewed under: (1) methods of approach, (2) the problem facing the prison psychologist, and (3) procedures by which this problem may be attacked.—*H. Cisney* (Worcester State Hospital).

**2143. Scripture, E. W.** Macrophonic speech. *J. exp. Psychol.*, 1935, 18, 784-791.—A detailed description of the results of speech registration by mechanical means. It is shown that currents and puffs of breath from the mouth and nose constitute a complete system of speech. As this system is composed of mass movements of air it is termed macrophonic speech. It is pointed out that all registrations—macrophonic, microphonic and myokinetic—show that speech consists of continuous movements. There are no constant portions, no blocks of speech and no glides.—*H. W. Karn* (Pittsburgh).

**2144. Segers, J. E.** La fonction de globalisation et l'enseignement de l'écriture. (The function of globalization and the teaching of writing.) *Arch.*

*belges Sci. Educ.*, 1935, 1, 5-13.—The author presents satisfactory results for the learning of writing by the global or by the analytic method.—R. Nihard (Liège).

2145. Simoneit, M. **Grundsätzliches aus der Praxis der Psychologie vom Führerum.** (Fundamentals from practical experience of the psychology of leadership.) *Ber. Kongr. dtsch. Ges. Psychol., Tübingen*, 1935, 14, 202-205.—From the new techniques of aptitude testing a practical psychology of leadership has developed. It has been found impossible to detect leadership by direct means. This is possible only after a thorough understanding of the subject has been obtained, while care must be taken that this understanding is not restricted by the purpose of the examination. Psychologist and practical man work together on the description and interpretation of the behavior displayed by the subject; both must be convinced that their function is necessary and helpful, but that the subject must choose for himself in the last instance.—H. Beaumont (Kentucky).

2146. Sondén, T. **Behandlingen av asociale homosexuella.** (The treatment of asocial homosexuals.) *Soc.-med. Tidskr.*, 1935, 12, 196-202.—This is a critical discussion of the new radical proposals of the Swedish State Medical Board concerning asocial homosexuals. It is proposed that all asocial homosexuals having had relations with persons under 20 years of age shall be committed to state hospitals for the mentally diseased, and that on the whole homosexuality shall disappear from the National Penal Code. Several objections from medical and social points of view are offered.—M. L. Reymert (Mooseheart Laboratory for Child Research).

2147. Sulyomfi-Schulmann, A. **A beszédhibák elhárítása különös tekintettel a dadogásra.** (Prevention of speech defects with special regard to stuttering.) Kalocsai: 1935. Pp. 1-149.—Introduction. I. Correction of speech generally. II. Vocal speech as a factor of psychic evolution in childhood. III. Protection of speech. IV. Essence of various degrees of stuttering and methods of treatment: (1) in family; (2) in school; (3) in special courses or classes; (4) of chronic stuttering. V. Results of the newest researches in stuttering. The stutterer from the standpoint of structural analysis. Anatomy and physiology of the extrapyramidal tracts. VI. Evolution of speech in childhood from a therapeutic standpoint. Literature.—P. Ranszburg (Budapest).

2148. Taylor, W. S. **Is truth individual or social?** *J. soc. Psychol.*, 1935, 6, 348-356.—"Individuals discover truth, . . . individuals hold truth, communicate it, and receive and understand it as best they can." It is held "that individual thinkers, not cults or classes, are the actual growers." Objectivity of truth consists only in widespread, individual, rational acceptance of truth.—E. B. Newman (Swarthmore).

2149. Terman, L. M., & Buttenwieser, P. **Personality factors in marital compatibility: II.** *J. soc. Psychol.*, 1935, 6, 267-289.—Correlations between

husbands and wives for Bernreuter and Strong inventory ratings were found to be all quite small but uniformly positive. Correlations were as high for divorced or unhappily married as for happily married groups. Tetrachoric correlations for individual items on the inventories, however, reveal some items where agreement or disagreement is diagnostic for one of the three groups. Correlations of happiness-in-marriage scores with individual inventory scores revealed some suggestive relations. Both mates are likely to be happy if both have low neurotic or introversion scores, and if husband has teachers' interests. Husbands are happy if they have chemists' interests or if they have dominant wives. Wives are happy if husbands are educated and do not have life insurance salesmen's interests. Both are happy if they agree in liking or disliking argument.—E. B. Newman (Swarthmore).

2150. Teschitz, K. **Religion, Kirche, Religionsstreit in Deutschland.** (Religion, church, religious conflict in Germany.) *Pol.-psychol. SchrReih. Sex-Pol.*, 1935, No. 3. Pp. 112.—A Marxian seeks to explain the social and psychological processes underlying recent religious conflicts in Germany. His interpretation of the foundations of religion rests partly on the economic theories of Marx and Engels and partly on psychoanalytic theories of sexual repression in the family resulting in anxiety and a sense of sin which finds relief in religious ecstasy. In his opinion fascism is always a struggle against religion. A mixture of radical and reactionary factors is shown to exist in national socialism and in the new German faith movement, but also in Catholicism and in the traditional evangelical protestantism (now become militant as the *Bekenntniskirche* or profession church in opposition to the *Deutsche Christen*, who seek to subordinate the church to the fascist state). Detailed accounts of recent church conflicts are documented by copious newspaper quotations. The author appeals to all anti-fascists to fight together for freedom of belief.—M. F. Martin (West Springfield, Mass.)

2151. Tu, T. C. [A general survey of the studies of Chinese character reading and the analysis of their outstanding problems.] *Quart. Rev. Sun Yat-sen Inst. Advanc. Cult. Educ.*, 1935, 2, 63-83.—This paper reviews non-critically (1) researches in the psychology of learning Chinese, by T. F. Lew, L. S. Tsai and E. Abernethy, W. Ai, and S. K. Chou; (2) studies of the horizontal and vertical arrangements of the Chinese characters, by P. S. Kao and L. C. Cha, L. K. Chen, and H. A. Carr, E. Shen, S. K. Chou, T. C. Tu, and W. Ai; (3) comparison of reading vulgar and literary Chinese, by W. Ai, and F. C. Wang; (4) a study of the influence of new and old systems of punctuation on reading, by I. Chang; (5) analysis of eye movements in reading, by E. Shen, F. C. Wang, and I. Hu; and (6) survey and testing of general reading ability, by W. Ai, F. C. Wang, I. Hu, and T. C. Tu. The author suggests that the following outstanding problems need to be solved soon or further studied: (1) comparison of loud and silent reading of Chinese, (2) the position of punctuation, (3) the lengths of the vertical and horizontal arrangement, (4) the size of the printed

characters and spacing, (5) the reading interests of children, (6) comparison of the difficulty and ease of learning vulgar and literary Chinese, (7) the distribution of practice time in reading, (8) organization of exercise material of reading, (9) influence of "chu yin tzu mu" (phonetic alphabet) on reading, (10) comparison of the methods of diagnosing obstacles in reading, (11) relationship between intelligence and reading ability, and (12) sex difference in reading ability. Bibliography.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2152. Voegelin, E. *Rasse und Staat.* (Race and state.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 91-104.—In the political reorganization of Germany the racial consciousness of the people was happily combined with the national idea of unification. This has been possible because of several historical factors, notably the contrast between national ideals and reality. Thus the national socialistic movement could incorporate the racial idea into the political organization of the new state.—H. Beaumont (Kentucky).

2153. Vreeland, F. M., & Corey, S. M. A study of college friendships. *J. abnorm. soc. Psychol.*, 1935, 30, 229-236.—This study suggests that intelligence and scholarship, as well as prejudices regarding intellectual questions not a part of the student's immediate experience, were relatively unimportant, but that degrees of neuroticism and social intelligence play some role in the selection of friends. The number of pairs of friends selected was 30, both members of each pair being of the same sex.—C. H. Johnson (Boston Psychopathic Hospital).

2154. Wallon, H. *Le réel et le mental (a propos d'un livre récent).* (The real and the mental—with reference to a recent book.) *J. Psychol. norm. path.*, 1935, 32, 455-489.—This article is a discussion of Lévy-Bruhl's *La mythologie primitive. Le monde mythique des Australiens et de Papous.* Lévy-Bruhl's contention that there is an irreducible opposition between the primitive mind and ours is sharply criticized. Neither primitive nor modern thought is homogeneous or stable enough to be treated as a unit. The characterization of primitive mythical experiences developed by Lévy-Bruhl applies exactly to modern scientific experiments, although myth and science use different procedures to enter into relation with the invisible. Upon detailed examination the conclusion is reached that the opposition cannot be upheld, because primitive myths and rites are nothing but the first development of certain mental techniques, particularly those that have to do with the properties of number.—R. E. Perl (Columbia).

2155. Wellek, A. *Zur Typologie der Musikalität der deutschen Stämme.* (A typology of the musical sensitivity of the German racial groups.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 130-136.—H. Beaumont (Kentucky).

2156. Wittmann, J. *Aufgaben der Spracherziehung.* (The functions of language training.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 246-248.—The functions of language training as a training

in the use of language and a training through language follow from the fundamental functions of language: articulation, symbolism, self-expression and communication. The teacher of language should study the spirit of language and understand that it is more than a simple means of exchanging thoughts.—H. Beaumont (Kentucky).

2157. Wright, M. *Getting along with people.* New York: McGraw-Hill, 1935. Pp. ix + 310.—The author, in a simple, conversational style, frequently enlivened with incidents from the lives of great men, points out some of the things we can do and ought to do if we want to become leaders.—E. B. Royer (Oklahoma A. & M.).

2158. Zeise, L. *Zur praktischen Bedeutung der Sprachanalyse.* (The practical significance of an analysis of language.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 293-294.—H. Beaumont (Kentucky).

[See also abstracts 1815, 1841, 1850, 1859, 1905, 1941, 1959, 1972, 1977, 1981, 2012, 2013, 2019, 2039, 2047, 2062, 2071, 2072, 2077, 2082, 2159, 2167, 2168, 2224, 2229, 2233, 2254, 2255.]

#### INDUSTRIAL AND PERSONNEL PROBLEMS

2159. Breitinger, M. *Zur Sozialpsychologie des Berufs.* (The social psychology of occupations.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 216-218.—In the labor unions there was a complete lack of professional ethics and pride in work. Even in occupations which were of considerable social value strikes were used as weapons to achieve certain gains. From the forms of older industrial organizations we may learn the prerequisites of a human society bound together by mutual labor and interest.—H. Beaumont (Kentucky).

2160. Casselberry, W. S. *The psychologist in private practice.* *Psychol. Exch.*, 1935, 4, 57-58.—Four aspects of the profession of consulting psychologist are briefly discussed: (1) the field, (2) training for the work, (3) securing clients, and (4) services rendered.—H. Cisney (Worcester State Hospital).

2161. Chou, S. K. [The ways to develop industrial psychology (in China).] *Indep. Rev. (Chinese)*, 1935, Ser. No. 135, 9-15.—The author suggests that in promoting and developing Chinese industrial psychology, the following five points should be taken into consideration: (1) before we advocate any line of "experimental applied psychology," we must bear in mind the general attitudes of the society and must try first to clear up its possible bias, misunderstanding, and indifference; (2) China needs industrial psychology more than commercial psychology; (3) since Chinese industry is still in the stage of infancy, the study of industrial psychology must for the time being center upon the problems relating to working and administrative efficiencies and betterment of physical conditions in the factory, and not the problems relating to selection and distribution of workers (the so-called "human factor"); (4) the first preliminary step of promoting Chinese industrial psychology lies in

observation and surveying as well as criticism and suggestion, rather than actual experimental and testing work, in order to improve all physical factors which influence working and administrative efficiencies as well as psychological attitudes; and (5) on account of lack of experts in industrial psychology in China, concentrated research and training of prospective students in industrial psychology are most urgent.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2162. Christiaens, A. G. *Etude relative au métier de soudeur autogène.* (A study of the trade of autogenous solderer.) *Bull. Off. intercom. Orient. prof. Brux.*, 1935, 15, No. 58. Pp. 14.—The author describes an attempt to preselect solderers. The tests chosen for the detection of subjects possessing the functional traits necessary for success in learning were the following: far and near visual acuity, the perception of relief and distances in depth, light acuity by means of Hering's esthesiometer, and intelligence as tested by Decroly's box and a verbal test. For testing twilight vision and surety of hand, the importance of which is stressed, the subjects were placed under conditions similar to those found in the work of soldering. The tests rated 12 men of different soldering attainments essentially as their employers rated them.—*R. Nihard* (Liège).

2163. De Cristofaro, —. *Le facteur humain dans les chantiers de travaux publics.* (The human factor in public coal yards.) *Travail hum.*, 1935, 3, 407-431.—Extensive lists of psychotechnical topics that might be investigated in coal yards are given, such as implements, slope of ramps, and size of the blocks of coal. Some typical problems were studied in an experimental yard, such as filling and transporting sacks of cement, loading blocks of coal on a truck, optimal number of shovellers around a car, comparative merits of shovel and fork. A more detailed report is presented on the study of the best methods of pushing a coal car up an inclined railway. The best arrangement in terms of kilogram-meters per second is to place both hands against the ends of the car and also press with the top of the head.—*H. E. Burtt* (Ohio State).

2164. Ferguson, L. W. *The importance of the mechanical features of an advertisement.* *J. appl. Psychol.*, 1935, 19, 521-526.—43 men and 55 women were interviewed and required to select advertisements that they remembered from a previous day's issue of the only local paper. The size ratio (number of columns multiplied by the length of the advertisement in inches) was judged with attention value and showed no relationship. No preferred position for advertisements was found. Advertisements appearing on Thursday and Friday had higher attention value, and women read advertisements more thoroughly than men.—*M. B. Lyraugh* (Psychological Corporation).

2165. Fontègne, J. *De quelques problèmes actuels de l'orientation professionnelle et de l'apprentissage.* (Some present problems of vocational guidance and apprenticeship.) *Travail hum.*, 1935, 3, 453-476.

—A review of some of the vocational problems in the constructional, mechanical and commercial fields. The need arises because of accidents, turnover, necessary increases in production, and re-education. Job analyses are described which give in successive rows the various aptitudes, classified as sensory, character, attention, memory, etc., and in successive columns the actual details of the task, such as reading blueprints and using a file; as entries in the cells of the table, code numbers indicate whether the given aptitude is indispensable or secondary. These tables may then be used in evaluating individual profiles based on tests or interview data. Most of the examples are in the field of mechanical work, although a few selling and secretarial vocations are mentioned.—*H. E. Burtt* (Ohio State).

2166. Hanna, J. V. *Job stability and earning power of emotionally maladjusted as compared with emotionally adjusted workers.* *J. abnorm. soc. Psychol.*, 1935, 30, 155-163.—The maladjusted group, in view of their more advanced average and median age (approximately two years), do not show as good job stability as the adjusted group. The maladjusted group is inferior to the adjusted group in average weekly wage from ages 16 to 24 inclusive. Those of the maladjusted group who were employed at the time of the comparison fail to measure up to that superiority in weekly salary which was expected of them on the basis of their age superiority. It would seem that the difference in average wage of the two groups is due to personality differences indicated by scores on the Thurstone Personality Schedule.—*C. H. Johnson* (Boston Psychopathic Hospital).

2167. Hische, W. *Gesetzmässigkeiten des Zusammenwirkens.* (Efficiency of working associations.) *Industr. Psychotech.*, 1935, 12, 335-344.—Harmonious work relations result from two influences: (1) individual performance and knowledge, leading to group recognition and esteem; and (2) personal qualities and individual human worth leading to comradeship.—*R. M. Bellows* (U. S. E. S. Div. Standards and Research).

2168. Ho, C. J. [The way out of the graduates of vocational schools.] *Educ. & Voc. (Chinese)*, 1935, Ser. No. 166, 385-400.—For a quantitative survey of the employment conditions of the vocational school graduates, a questionnaire was sent out to the various vocational schools and the replies of 28 schools (representing 11 provinces and municipalities) were obtained. The same questionnaire was sent directly to the graduates whenever the school report was not complete, thus supplementing the school reports. The results showed that (1) of the 365 graduates of various junior agricultural schools, 263 persons or 72.1% were employed, while 35 persons or 9.6% were unemployed; (2) of the 288 graduates of various senior agricultural schools, 222 persons or 77.1% were employed, while 34 persons or 11.8% were jobless; (3) of the 154 graduates of various junior technical schools, 109 persons or 70.8% were employed, while 12 persons or 7.8% were out of employment; (4) of the 325 graduates of various senior tech-

nical schools, 260 persons or 80.0% had jobs, while 28 persons or 8.6% had no jobs; (5) of the 116 graduates of various junior commercial schools, 66 persons or 56.9% were employed, while 25 persons or 21.5% had lost jobs; and (6) of the 140 graduates of various senior commercial schools, 109 persons or 77.9% were in employment, while 25 persons or 17.9% were out of employment. Out of all 1388 graduates of 28 vocational schools, 1029 persons or 74.1% were employed, 159 persons or 11.6% were unemployed, while 200 persons or 14.4% were pursuing higher education. When we compare the number of the employed graduates of the three kinds of vocational schools, we find that more graduates of the senior than junior agricultural, technical, and commercial schools were employed, especially more graduates of the senior technical schools. The author concludes that, quantitatively speaking, the condition of employment of the graduates of the vocational schools as such is not to be so much deplored as generally considered; but the vital question would rather lie in the qualitative aspect of these employments, that is, whether their work is in harmony with what they have learned. A separate paper is to be devoted to a discussion of this problem.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2169. Hsiao, H. H. [Some attempts at industrial psychotechnology.] *Contr. Educ., nat. Cent. Univ.*, 1934, 1, No. 2. Pp. 20.—The first attempt was made when 26 subjects were tested in the selection of engineering apprentices for Ginling University, Nanking. The tests used were those of visual observation, visual ability, three-dimensional visual ability, coordination of hands, concentration and distraction of mind, assortment of symbols, and multi-adaptability, Form A and Form B. On account of lack of norms for these tests, the selection of the apprentices was finally made on the basis of their relative standing in the test scores. A table of intercorrelations (calculated indirectly from  $\rho$  correlations) between all pairs of the 8 tests is given. In the second attempt, 10 workmen of the National Central University were tested, the tests used being those of observational ability, visual ability, sustained attention, three-dimensional visual ability, hand coordination, concentration and distraction of mind, assortment of symbols, precision of hand movement, estimation of angles, finger-joint sense, and multi-adaptability, Form A and Form B. A table of intercorrelations between all pairs of the 10 tests was also given. In the third attempt, 170 university servants were tested, using tests of sustained attention, concentration and distraction of mind, finger maze, relationship, and commission. The test of relationship proved to be too difficult, for 153 subjects out of 193, or 79%, failed in this test. The means, medians, and standard deviations of the scores of the 4 remaining tests, as well as coefficients of intercorrelation and correlation ratios between all pairs of the four tests were calculated and tabulated. The intercorrelations are all curvilinear, probably due to special conditions on the part of the subjects. The author also points out that the work curves may be classified

into high, low, and normal types; each type may again be subdivided into a regular and an irregular one. A "high type" of work curve is one in which a high level of work is maintained until a sudden drop occurs at the onset of fatigue. A "low type" of work curve is one in which only a low level of work is maintained until fatigue comes in. A "normal type" of work curve is one in which the work level rises gradually at the beginning and then falls gradually.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2170. Johnson, A. P. [Ed.] *A study of the English Vocabulary scores of 75 executives.* Tech. Rep. Hum. Engng Lab., 1935, No. 2. Pp. 24. \$1.00.—On the basis of the superiority of their scores to those of college graduates and their great superiority to those of non-college graduates, it is stated that large English vocabularies are a characteristic of the higher ranks of executives, including major supervisors as well as officials. There is no significant increase in vocabulary with age among the executives. The appendix has the occupational status of each subject.—R. Goldman (Clark).

2171. Johnson, A. P. [Ed.] *Comparative scores of two groups of graduate nurses.* Tech. Rep. Hum. Engng Lab., 1935, No. 4. Pp. 37. \$1.00.—30 graduate nurses, known as successful in their profession and having had at least 5 years of experience, comprised the first group. The second group were chosen on the same bases except for length of experience. The average age for group 1 was 37.2 years, that of group 2 28.3 years. Worksamples measuring accounting aptitude, engineering aptitude, tweezers and finger dexterity, inductive reasoning, creative imagination, word knowledge, and art appreciation were given. As compared with unselected persons the total group has the following general characteristics: relatively large vocabularies, objective or extremely subjective types of personality, high tweezers and average finger dexterity, high accounting and low engineering aptitude. Recommendations regarding the type of applicant which should be admitted to nursing schools are given.—R. Goldman (Clark).

2172. Kotten, A. *Psychologische Untersuchung der Arbeit am Support mit Hilfe von Korrelationsrechnungen.* (Psychological investigation of work with support, with the help of correlation calculations.) Hannover: (TeH. Diss.), 1935. Pp. 80.—R. R. Willoughby (Clark).

2173: Kroeber-Keneth, L. *Unfallneigung und Handschrift.* (Accident proneness and handwriting.) *Industr. Psychol.*, 1935, 12, 321-334.—The general relation between unsuitability and accident proneness is pertinent to the interpretation of handwriting as it is related to accident inclination. Unfitness in general and illegible handwriting are likely to be accompanied by peculiar personal temperament and emotional maladjustment. Fourteen handwriting samples are presented and analyzed and it is concluded that writing is a reliable index to accident proneness.—R. M. Bellows (U. S. E. S. Div. Standards and Research).

2174. Lauer, A. R. Fundamental requirements of a Ph.D. in psychology. *Psychol. Exch.*, 1935, 4, 52-54.—In the author's opinion psychological training should fit a man or woman for a larger place in society than he could fill without it. He urges Ph.D.'s to enter the business and professional world, and suggests a variety of possible occupations, among them: conducting a teachers' agency or an insurance agency, serving on a police force, running a detective agency, managing a chain of stores, or assisting in sales promotion campaigns.—*H. Cisney* (Worcester State Hospital).

2175. Ledent, R., & Wellens, L. La sélection et la surveillance des conducteurs des tramways unifiés de Liège et extentions. (Selection and supervision of operators for the tramways of Liège and suburbs.) *Travail hum.*, 1935, 3, 385-406.—Psychotechnicians collaborate with physicians in examining applicants. The psychotechnical examination includes simple auditory reaction time, judgment of distances with moving members meeting one another or one overtaking the other (the subject is required to estimate the time at which they will meet), and a test of attention involving complicated choice reactions with hands and feet and auditory as well as visual stimuli. Superiority in one test is allowed to offset inferiority in another. Scores are grouped roughly in seven categories. Of the operators in the highest three groups in the test, 95% were rated by supervisors as good or very good.—*H. E. Burtt* (Ohio State).

2176. Masuhr, H. Zur Unterstützung militärischer Menschenauslese durch soziologische Statistiken. (In support of the selection of military personnel by means of sociological statistics.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 291-292.—*H. Beaumont* (Kentucky).

2177. Nuber, H. Die psychische Elastizität des militärischen Führers. (The psychic elasticity of the military leader.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 206-207.—In military circles it is said that warfare is an art, a creative activity. If this is so, the military commander requires psychic elasticity, by which is meant the mental ability to react to the present situation in such a way as will further the achievement of objectively necessary aims.—*H. Beaumont* (Kentucky).

2178. Patry, F. L. Psychobiological implications of a changing social-economic order in medical practice. *Med. Rec.*, N. Y., 1936, 143, 45-47.—The essential problem in the practice of medicine if there is to be maintained a satisfactory physician-patient relationship is the cultivation of free choice and decision patterns. This is becoming increasingly difficult by virtue of the constant changes in the social and economic aspects of society.—*M. H. Erickson* (Eloise Hospital).

2179. U. S. Employment Service. Interviewing applicants in public employment offices. *Employ. Off. Mgmt Ser.*, Wash., 1935, Sect. I. Pp. 36.—A description of interviewing methods, with an analysis of requirements from the point of view of the interviewer and the applicant.—*C. M. Louitt* (Indiana).

2180. Vernon, H. M. The shorter working week. London: Routledge, 1934. Pp. viii + 201. 8/6.—

This book is "A study of the two-shift system as a solution to the problem of decreasing hours and increasing leisure in industry." First a survey is made of the character and extent and some of the reasons for increasing unemployment in industry. This is followed by a description of various schemes for "rationalization" and a study of the weekly hours of labor current in a number of important industries. The two-shift system and the various ways in which it can be applied are fully described and discussed in three chapters, the whole being based not upon opinion but upon facts which have been directly observed. A representative selection of opinions of operatives and employers on the working of a two-shift system is next presented, and the author concludes that the two-shift system merits the serious consideration of practically all employers. A final chapter gives such facts as are available with regard to the ways in which workers at present use their leisure time, and with an appeal for a more thorough investigation of the problems involved.—*F. C. Bartlett* (Cambridge, England).

2181. Vershofen, W. Führung im Arbeitsleben. (Guidance in industrial life.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 212-216.—The atomistic-liberalistic concept of the past era forbade the state to regulate industrial life. The recent economic crisis has demonstrated that such guidance is indispensable. It is not feasible to leave to the "free play of economic forces" how much labor the nation has to perform, how this will be achieved and who will have a part in it. Occupation and unemployment may not be left at the mercy of chance or of the consumer, who is largely responsible for the crisis.—*H. Beaumont* (Kentucky).

2182. Wilson, J. G. Psychiatric aspects of job placement. *Publ. Hlth Rep.*, Wash., 1934, 49, 1543-1545.—Experience in two Federal prisons shows that men with IQ's less than 75 cannot be depended upon in positions of truth or requiring responsibility. This group of prisoners should be automatically eliminated from such jobs. Placement of all other types must depend on individual examinations.—*C. M. Louitt* (Indiana).

2183. Yernaux, —. Une expérience relative à la sélection des recrues dans l'armée. Détermination des aptitudes par les Army Mental Tests. (An experiment in the selection of army recruits. Aptitude determination by the Army Mental Tests.) *Bull. Off. intercom. Orient. prof.* Brux., 1935, 15. Pp. 32.—This article (also published in *Bull. belge Sci. milit.*, Oct. 1934) gives the results which the author, a captain, secured from 1928 to 1932 with an application of a French form of the Army Alpha to 467 recruits in the telephone signal section of the Belgian army. The results were satisfactory for the division of the soldiers into homogeneous groups and for the adjustment of instruction to the intellectual level of the men.—*R. Nihard* (Liège).

2184. Ziegler, H. W. Zur Psychologie des Soldatentums. (The psychology of militarism.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 128-130.—Militarism is a mental attitude which

develops in forceful individuals in the face of an existing or threatening danger. It may develop into an independent philosophy of life. The origin of the present-day German militarism was in the world war, especially on the Western front. It includes at once a frank realism and highest idealism and is to be considered a fundamental form of the new German culture and society.—*H. Beaumont* (Kentucky).

2185. Zilian, E. *Zur Prüfung der Intelligenz innerhalb einer militärischen Menschenauslese.* (Testing intelligence as a part of the selection of military personnel.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 289-291.—*H. Beaumont* (Kentucky).

[See also abstracts 1859, 1881, 1883, 2138, 2241.]

#### EDUCATIONAL PSYCHOLOGY

2186. Ai, W. [The measurement of Chinese characters.] *Monogr. Psychol. Educ. nat. cent. Univ.*, 1934, 1, No. 2. Pp. 96.—The aim of this investigation was to ascertain the size of Chinese vocabulary in the different grades. A total of 3580 pupils from elementary and senior and junior high schools at Nanking and Hangchow were tested. The learning of Chinese characters progresses most rapidly in the first 4 grades (elementary grade V to junior class II inclusive) and comparatively slowly in the last 4 grades (junior class III to senior class III inclusive). The scores of knowing pronunciation but not meaning are better than those of knowing meaning but not pronunciation, and especially so in the first few grades. It seems that learning pronunciation of a Chinese character is rote memory. The estimated size of vocabulary according to the criterion of knowing both pronunciation and meaning from the two forms of the test respectively would be 2245 and 1975 characters for elementary grade VA, 2684 and 2298 characters for grade VB, 3237 and 2739 characters for grade VIA, 3640 and 3151 characters for grade VIB, 4509 and 4014 characters for junior class IB, 5161 and 4612 characters for junior class IIB, 5424 and 4803 characters for junior class IIIB, 5801 and 5145 characters for senior class IB, 5970 and 5293 characters for senior class IIB, and 6187 and 5546 characters for senior class IIIB. The boys score much better than the girls; on the whole, the difference amounts to 1 year to  $1\frac{1}{2}$  years. The girls also have more half-learned characters (i.e., either knowing pronunciation but not meaning or knowing meaning but not pronunciation) than the boys. In the case of knowing both pronunciation and meaning of a character, Forms A and B of the test are correlated with a coefficient of  $.967 \pm .004$ . —*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2187. Ai, W. [Psychology applied to the teaching of school subjects.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 2, No. 1. Pp. 13.—After briefly discussing the first applications of psychology by school teachers, the content of educational psychology, and the growing importance of psychology of school subjects, the author goes on to review in a popular style the results of his own experimental studies.

First, the major principles of learning Chinese, the enlargement of vocabulary for elementary pupils, and the reading ability of junior and senior high-school students are discussed. Second, comparison of the different methods of teaching English and comparison of reading ability in English between American and Chinese students are made, and the mastery of English of high-school students is reviewed. Third, the development of number concepts, the formation of algebraic concepts, and the psychology of learning geometry are discussed.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2188. Bachelard, P. M. *The education of the retarded child.* *Aust. Coun. educ. Res. Ser.*, 1934, No. 26.—The results of English experiments, statistical studies and educational experience in England and Australia in providing education for children of various grades of ability are summarized and discussed with special reference to Australian conditions. It is advised that all children with IQ's above 70 be cared for in schools divided into two grades, one of which does regular work while the other, consisting of slow pupils and those behind in special subjects, are cared for at least partially in special or opportunity schools. Children with IQ's from 50 to 70 should be under the educational authorities and given limited academic training when and if they reach the mental age of 6 years, but most of their work should be manual and vocational. Children of IQ's under 50 should be in charge of medical authorities. Special training for slower pupils should begin early, yet the stigma of dulness should be avoided and the advantages of association with brighter children retained as far as possible. Pupils in opportunity classes, especially when backward in one or two subjects only, should be returned to regular classes as soon as possible.—*E. A. Kirkpatrick* (Eagle Bridge, N. Y.)

2189. Beers, F. S. *The committee on educational testing.* *J. higher Educ.*, 1936, 6, 469-474.—The desire of the committee on testing of the American Council on Education is "to supplement and aid other agencies such as colleges, associations of colleges, or state organizations for testing or guidance." "Subject matter" tests covering the fields of mathematics, the foreign languages, the sciences, and the social sciences have been developed from "an analysis of numerous textbooks in each discipline." Other "general background" tests have been prepared. Results showing no relation between age or length of training and achievement, striking differences within a given college, and marked overlapping between freshmen and seniors "call into question the unit and credit system" at present so generally accepted in American education. The discussion is illustrated by a number of extreme cases. Following criticism of the "general psychological test" and the "constancy which characterizes the intelligence quotient," the achievement test is said to "combine an index of general intelligence with an index of interest and thus has immediate value for guiding the student in the direction in which he is likely to be most successful." —*R. A. Brotman* (Pennsylvania).

2190. Benedek, L. *A tanulás egészségtana.* (Hygiene of learning.) *Gyermekek*, 1935, 27, 1-14.—Radio lecture.—P. Ranschburg (Budapest).

2191. Casanova, T. *Educational psychology and some aspects of education in Latin America.* San Juan, Puerto Rico: Univ. of Puerto Rico, 1934. Pp. 170.—The author discusses elementary education, secondary education, recent trends in education, the training of teachers, research in education, experimental investigation, testing, etc. Bibliography.—(Courtesy *J. educ. Res.*)

2192. Chen, K. C., & others. [A report of the construction of a measuring scale for English spelling.] *Shih Ta Mo.* (32nd Anniv. Mem. Issue), 1934. Pp. 12.—A measuring scale for English spelling ability of junior high-school students in 3 forms, each consisting of 37 words, was constructed. It was then used in testing 780 students from 10 public, private, and denominational junior high schools at Peiping. "Scale scores," i.e., difficulty values, were calculated for each of the three forms. The accuracy of this measuring scale was determined by the coefficients of correlation between the scores obtained from 3 classes of students in a spelling test of 50 words selected by their respective teachers from the Ayres scale and scores obtained in a test of Form A of this scale, which were  $.89 \pm .02$ ,  $.78 \pm .04$ , and  $.70 \pm .05$  respectively. Its reliability was determined by the coefficients of correlation between every 2 of the 3 forms, which were  $.72 \pm .05$  (junior II, 38 persons) and  $.85 \pm .03$  (junior III, 40 persons) between Forms A and B;  $.86 \pm .03$  (junior I, 43 persons) and  $.88 \pm .02$  (junior II, 48 persons) between Forms A and C; and  $.80 \pm .03$  (junior I, 49 persons) and  $.88 \pm .02$  (junior III, 67 persons) between Forms B and C. The authors conclude that this measuring scale is fairly accurate and reliable for differentiation of the English spelling ability of the junior high-school students at Peiping.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2193. Chou, S. K. *Educational measurements in the mass education movement, 1927-1934.* Peiping: Chinese Nat. Ass. Mass Educ. Movement, Res. Comm. Educ. Psychol. Rep. No. 1, 1935. Pp. 24.—The author reports that altogether 44 tests, including both intelligence and achievement tests, have been devised and applied during 1927-1934. These tests contain 2 to 6 sub-tests of 5 to 100 items each. No less than 26 kinds of sub-tests have been used with varying frequencies of application, and are all standard, objective, new-type tests. About 5000 pupils of the People's Schools have been tested 2 to 25 times, and about 20,000 more pupils have been tested only once, making a total of 36,667 records. Concerning the relationship between age and ability to learn Chinese, the data of 55 groups of 2469 persons, tested by a majority of the 44 tests and examinations mentioned above, have been analyzed according to age groups. The number of persons in the 10 different age groups is, however, extremely variable, sometimes including several thousand and frequently only one. It may be noted that the two sets of curves

plotted from the pooled results of 1562 cases of intelligence-test scores and from those of 23,129 cases of achievement tests of literacy, phonetics, and abacus calculation respectively, coincide for the age groups 10-15 and 25-30, but the youngest and older age group curves diverge. The achievement curves in learning Chinese, phonetics, and abacus calculation are practically horizontal from 15 to 45, thus substantiating Thorndike's findings that adults of age 25 to 45 learn at nearly the same rate and in nearly the same manner as they would have learned the same thing at 15 to 20. Even after the age of 45, one is inclined to think that, had there been enough cases, the curve would continue to remain horizontal. The curve of intelligence falls off for the youngest age group and for the older age group from 30 to 35 and up. So far as achievement in learning Chinese, phonetics, and abacus is concerned, therefore, the present data seem to indicate that concentration of effort for literacy education need not be limited to the age group 15-25. In fact, literacy education might well be extended to the fathers and grandfathers of the pupils in the People's Schools. The results of applying the intelligence test, type A, to about 1000 soldiers and to 650 pupils of the People's Schools also show that the average score of the pupils is some 20 points higher than that of the soldiers, thus indicating that the literacy work done in the People's Schools (a period of study ranging from 1 to 8 months) has some effect in raising the general intelligence level of the rural people. Finally, the report also outlines the future steps toward construction of standard tests, including determination of the frequency of characters in the People's Texts, revision of the 1320 foundation characters list, selection of people's writing vocabulary, determination of the difficulty of the fundamental vocabulary, and selection of compound words and phrases, as well as the rural leadership study and the project of the durability of adult learning.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2194. Collmann, R. D., & Jorgensen, C. *The prediction of scholastic success.* New York: Stechert, 1935. Pp. 68. \$75.—(Not seen).

2195. Drever, J. *The place of psychology in the training and work of the teacher.* *Brit. J. educ. Psychol.*, 1935, 5, 242-249.—Contends that pedagogical theory must be based on psychological findings; that if teaching is a profession preparation for it must include sufficient psychological knowledge to be a basis for scientific practice of the profession; that the handling of children in school demands understanding of the whole psychological situation.—K. M. Cowdery (Stanford).

2196. Engle, T. L. *Achievement of pupils who have had double promotions in elementary school.* *Elem. Sch. J.*, 1935, 36, 185-189.—Some questionnaire data were obtained in 1935 from 25 accelerated and 50 non-accelerated pupils who were graduated from elementary school in 1925-6. The writer concludes tentatively that "some acceleration in elementary school does not handicap a person educationally, vocationally, or socially."—P. A. Witty (Northwestern).

**2197. Eurich, A. C. A co-operative experimental project.** *J. higher Educ.*, 1936, 6, 480-487.—The instructor, a "specialist in subject matter," provides the list of objectives for his course; an "examination counsellor" serves as a consultant in the techniques; an assistant, usually a graduate student in the field, duplicates the student activity in the entire course work in detail and prepares examination items in a scientific and systematic manner. The plan now covers the 30 courses given. Teachers' marks during the term are for student comparison only; final credit and points must be secured by means of comprehensive examinations developed from the course examinations. Subject-matter questions are validated by the standard error of the difference method on the basis of tertile divisions of the class group. Appreciation questions for attitude scales are validated by the pooling of expert judgments of scholars in the field.—*R. A. Brotemarkle* (Pennsylvania).

**2198. Finck, E. M. Relation of ability in reading to success in other subjects.** *Elem. Sch. J.*, 1935, 36, 260-267.—21 pairs of pupils in grades 4 to 8 were equated on the basis of age, IQ, and score on the Stanford Achievement Test. The experimental group received remedial instruction in reading daily for five months (their reading status at the beginning of the experiment is not reported), and thereupon showed an average gain on the whole test 1.85 times that of the control group.—*P. A. Witty* (Northwestern).

**2199. Good, C. V. Doctors' theses under way in education, 1935-1936.** *J. educ. Res.*, 1936, 29, 384-406.—Returns from 47 institutions give a total of 511 doctors' theses under way. These are listed with the name of the investigator, the title of the investigation, the institution, and the staff member under whom the work is being done.—*S. W. Fernberger* (Pennsylvania).

**2200. Gray, R. A. Bibliography of research studies in education, 1933-1934.** *U. S. Off. Educ. Bull.*, 1935, No. 5. Pp. 328.—List of 3500 annotated references, many of which are unpublished theses.—*C. M. Louttit* (Indiana).

**2201. Gray, W. S. Selected references on teacher education.** *Elem. Sch. J.*, 1935, 36, 299-306.—Listed and annotated are 57 selected references which "discuss significant issues relating to the education of teachers in elementary and secondary schools and in higher institutions"; these were published between July 1, 1934 and June 30, 1935.—*P. A. Witty* (Northwestern).

**2202. Grossnickle, F. E. Errors and questionable habits of work in long division with a one-figure divisor.** *J. educ. Res.*, 1936, 29, 355-368.—Analyses of 1211 test papers of 100 cases each for 11 school grades were made. In all 57 types of error were discovered. The higher the grade the fewer different types of error were made.—*S. W. Fernberger* (Pennsylvania).

**2203. Gundlach, W. B. Ability of high school pupils in common fractions.** *J. educ. Res.*, 1936, 29, 347-354.—The author attempts to determine the curve of growth in ability to work examples in com-

mon fractions and to determine to what extent the factor of mental ability affects this growth curve. The Brueckner diagnostic tests in fractions were given to 623 Rochester, Minnesota, pupils distributed through grades 7 to 12 inclusive. A statistical treatment of the results indicates that the ability to solve examples in addition, subtraction and multiplication increases with maturity, while the ability in division of fractions tends to decrease slightly through the grades of the secondary school until grade 12 is reached. Results from IQ's obtained by the Terman tests parallel the results for arithmetical operations.—*S. W. Fernberger* (Pennsylvania).

**2204. Jones, E. S. Planning college schedules: guidance in the choice of studies.** *Occupations*, 1936, 14, 315-318.—The author discusses the relationship between educational and vocational guidance as it actually exists in the student personnel program at the University of Buffalo. In many institutions there is a conflict between the educational aims of culture and of utility. It is here pointed out that conflict can be dissolved by providing an advisory system which will help students plan their schedules, and the organization of such a system is explained.—*R. H. Brown* (Yankton).

**2205. Lee, H. N., & Lee, P. T. [Teaching in the single-grade schools.]** Shanghai: Commercial Press, 1935. Pp. 161. \$30 Mex.—Single-grade schools are economical and well adapted to rural districts and, in view of the large mass of uneducated school-age children and lack of necessary funds, are urgently needed in China. This book is devoted to a comprehensive study of the principles and techniques of single-grade teaching, covering such topics as classification of students on the basis of ability, classroom seats, combination of school subjects, daily teaching schedule, teaching projects, treatment of students' performance and methods of examination, teaching instruments, classroom management, etc. Special chapters are devoted to a detailed discussion of the students' exercise books and performance records, extracurricular activities, child (student) assistants, and self-activity, which are all essential to the success of single-grade teaching. The last chapter gives teaching procedures for the Chinese language, arithmetic, common sense and reading, music and fine arts.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

**2206. Lloyd-Evans, A. The place of psychology in the training of teachers.** *Brit. J. educ. Psychol.*, 1935, 5, 257-265.—The author notes the growth in attention to psychology in the evolution of teacher training during the past thirty years. Recent students, relatively inexperienced, report that their psychological training had been useful to them in helping them understand themselves, in aiding their adjustment to their social surroundings, and in helping them to see their pupils as individuals. In many cases these students have been assigned to work under conditions where the application of useful psychological principles would be very difficult.—*K. M. Cowdery* (Stanford).

2207. Lombard, E. C. Parent education opportunities. *U. S. Off. Educ. Bull.*, 1935, No. 3. Pp. 53.—Describes the activities of agencies which have had parent education programs since 1930.—C. M. Louttit (Indiana).
2208. Máday, I. [Female education and individual psychology.] *Jövő Utjain*, 1935, 9-10, 121-123.—P. Ranschburg (Budapest).
2209. Martens, E. H. Coordination of effort for the education of exceptional children. *U. S. Off. Educ. Bull.*, 1935, No. 7. Pp. 82.—Report of a conference on means of increasing the coordination between the U. S. Office of Education and the various organizations concerned with the education of exceptional children. Short papers by 17 participants are presented in full. The report includes a descriptive directory of organizations dealing with exceptional children.—C. M. Louttit (Indiana).
2210. Meng, H. Strafen und Erziehen. (Punishment and education.) *Z. psychoanal. Pädag.*, 1935, 9, 293-300.—Punishment as a pedagogical procedure should be applied only when the circumstances under which the child displayed the undesirable behavior form are known. It should never be used as an outlet for irritation. When punishment appears unavoidable the following should be observed: (1) The child's motives must be understood. (2) Is this an isolated act or a repetition? If the latter, what are the conditions under which it has occurred before? (3) Against whom has the undesirable act been committed and why did the child select that person? (4) The child must be asked his attitude towards his own behavior. (5) If the child sees that he has been at fault, is it possible to convince possible accomplices? In all cases of punishment it is necessary that the child understand that his misdemeanor will be absolutely forgiven after he has been punished. Under these conditions, punishment as a pedagogical method will make itself eventually superfluous.—H. Beaumont (Kentucky).
2211. Moritz, K. Über Persönlichkeitsbildung durch Werkstudententum. (Personality culture by means of student work.) Königsberg: Author, 1934. Pp. 76.—R. R. Willoughby (Clark).
2212. Noetzel, E. S., & Hildreth, H. M. A survey of the mental hygiene needs of 250 school children. A study in organizing a community in child guidance. *Psychiat. Quart.*, 1935, 9, 525-537.—In a survey of the Rockwell Union Free School, Nedrow, New York, it was found that the children on the whole were brighter than average; their work was average for their age but not quite up to the level of their ability. The grade level of attainment was considerably below standard because the children were too young for the grades and generally misplaced. Recommendations were: relocation of children on basis of achievement and mental age; raising age of admission to first grade to six years; further use of tests to detect and remedy individual defects; referral of questionable cases to the children's clinic; occasional surveys. Subsequent reports show marked improvement in the results of teaching as evidenced by higher grades on the Regents examinations. Disciplinary problems were also found to be fewer.—C. R. Atwell (Boston Psychopathic Hospital).
2213. Northby, A. S. A comparison of five types of spelling tests for diagnostic purposes. *J. educ. Res.*, 1936, 29, 339-346.—Study of 43 pupils in grade 6A in a Minneapolis school. 20 selected words were worked into a short story, were given in timed dictation in list or oral form, or were tested by the multiple-choice method. A statistical treatment indicates that there is considerable difference between the results on the five tests. The short-story form and timed dictation proved to have the greatest validity as test forms. The author believes that the different test forms call for different sorts of ability on the part of the pupils.—S. W. Fernberger (Pennsylvania).
2214. Pritchard, R. A. The relative popularity of secondary school subjects at various ages. II. *Brit. J. educ. Psychol.*, 1935, 5, 229-241.—The author continues by quoting reasons given for and against physics, chemistry and botany as favorite subjects. The two reasons most frequently given for preferring subjects are interest and proficiency, with interest leading except in arithmetic. Interest is subjective in mathematical subjects, being concerned with the processes carried on by the pupils, objective in the literary subjects and toward the subject matter. Chemistry ranks high because appealing to both subjective and objective interest. In the final orders of preferences mathematics and the languages are low, the humanities high. Six points of appeal emerge; the pupils (1) long for self-activity, (2) delight to prove things, (3) find great pleasure in discussion and argument, (4) feel the need for variety, (5) want everything so far as possible linked up with everyday life, (6) above all look for a human interest.—K. M. Cowdry (Stanford).
2215. Redl, F. Der Mechanismus der Strafwirkung. (The mechanism of punishment.) *Z. psychoanal. Pädag.*, 1935, 9, 221-270.—After surveying several theories of punishment and giving case histories of their applications to educational problems, the author concludes that the following errors may be made in applying punishment: (A) Errors in the choice of punishment. (1) Wrong evaluation of the case; punishment used instead of (a) appeal to insight; (b) reward; (c) educational guidance or analysis. (2) Wrong interpretation of the situation. Failure to consider (a) the external constellation; (b) the internal constellation; (c) the social implications; (d) regression to useless punishment without subsequent correction by means of guidance. (B) Errors in the structure of punishment. (1) Topical errors. Failure to consider (a) the child's level of development; (b) the basis of undesirable behavior; (c) the libidinal type. (2) Dynamic errors. Wrong evaluation of (a) the fear element; (b) the importance of the matter; (c) the relation between these two. (C) Errors in technique. Mistakes made in (1) the selection of the type of punishment used; (2) certain psychohygienic elements in carrying out the punishment; (3) the intensity and distribution of

punishment. The possible applications of these considerations to legal punishment are suggested.—*H. Beaumont* (Kentucky).

2216. Rickard, G. E. **The recognition vocabulary of primary pupils.** *J. educ. Res.*, 1935, 29, 281-291.—Study of 207 pupils from advanced first, second and third grades in a Chicago school. A sheet was compiled from the first 200 words in each of the Horn and Gates lists. The results give a small but basic vocabulary in which the words are ranked upon the basis of intrinsic difficulty of recognition unaided by context.—*S. W. Fernberger* (Pennsylvania).

2217. Schonell, F. J. **Broadcasting in the senior school.** *Brit. J. educ. Psychol.*, 1935, 5, 299-322.—School broadcasting is characterized as purely supplementary to other classroom work, but it can be useful in vitalizing school work and in training for leisure. As the result of carefully controlled experiments it becomes clear that note-taking of any kind is an unprofitable activity; that maximum use of good teaching illustrations for pamphlets should be made in forming broadcast material; that clear and simple instructions regarding pictures and ample time to examine them should be given; that there is value in a well-planned short preliminary teaching period before each broadcast; that broadcast lessons used scientifically are as effective with dull as with normal pupils. Broadcasts should not exceed 15 to 18 minutes in length, and should be clear, simple, and interesting. Pupil benefit from broadcast material is correlated with emotional stability (.53), with general verbal power (.51), and with general intelligence (.42).—*K. M. Cowdery* (Stanford).

2218. Seidler, R. **Die Entwicklung der individual-psychologischen Erziehungsberatungsstellen in Wien.** (The development of individual-psychological stations for educational counselling in Vienna.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 217-220.—See III: 4956.—*O. N. de Weerdt* (Beloit).

2219. Shen, H. M. [One hundred and twenty ways of teaching silent reading.] Shanghai: Commercial Press, 1934. Pp. 188. \$40 Mex.—This book is a comprehensive review of the various methods of teaching silent reading, with the aim of cultivating the children's ability and interest in silent reading. The first three chapters discuss the importance and aims of silent reading, some basic principles of teaching silent reading, and directions for the use of this book. The following six chapters review and discuss 120 exercises for teaching silent reading, including those for speed (17), comprehension (48), choice (27), organization (16), memory (8), and rapid reading (4). The material is mostly adapted from the current child readers, textbooks of primary schools, and teaching material for junior high schools, and is of practical educational value.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2220. Simon, A. **A case of sibling rivalry.** *Int. J. Indiv. Psychol.*, 1935, 1, 14-23.—A detailed report of a typical behavior clinic case.—*O. N. de Weerdt* (Beloit).

2221. Smith, H. P. **The relative efficiency of the junior high school vs. the conventional 8-grade type of school.** *J. educ. Res.*, 1935, 29, 276-280.—Comparison of two matched groups from the different types of school in Syracuse, N. Y. Intelligence and achievement tests were given. The results are inconclusive and it appears that the junior high school can do as efficient work as the conventional type for these grades. The author believes that much is to be gained by the broader curriculum and extra-curricular activities of the junior high school.—*S. W. Fernberger* (Pennsylvania).

2222. Somers, G. T. **Out-of-line and unadjusted pupils in Monroe County.** *Ind. Univ. Sch. Educ. Bull.*, 1935, 12, No. 1, 3-17.—Out-of-line pupils were discovered by a program of educational and intelligence tests and by teachers' judgments. Among about 3000 pupils 696 were shown to be out of line by the tests and 1476 by the teachers' judgments. Only 452 pupils were in both groups. The study gives evidence that teachers do not know their pupils and the author suggests certain changes in the school procedure that would overcome this.—*C. M. Louitt* (Indiana).

2223. Spiel, O. **Consultation hour in school.** *Int. J. Indiv. Psychol.*, 1935, 1, 24-32.—Translation from *Int. Z. Indiv. Psychol.*, 1931, 9, 183-191.—*O. N. de Weerdt* (Beloit).

2224. Stekel, W. **Föräldrarnas fostran.** (Parent education.) Stockholm: Natur och Kultur, 1935.—This is a translation of Stekel's recent publication in German under the same title. The view is propounded that the root of all nervous diseases may generally be found in the family.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

2225. Sun, M. C. [Teaching of various school subjects in the lower grades.] Shanghai: Commercial Press, 1935. Pp. 154. \$25 Mex.—The author first reviews the general principles of teaching in the elementary schools as formulated in the standard curriculum of elementary schools and the characteristic features of teaching in the lower grades. He then discusses the evolution of subject matter, aims, and methods of teaching of the following school subjects in ten chapters: reading, composition, handwriting, conversation, arithmetic, common sense, manual labor, fine arts, music, and physical exercise. A chapter is also devoted to a study of the methods of rating and correcting students' performances.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2226. Tai, S. C. [Ed.] [Selected essays on educational psychology.] 2 vols. Shanghai: Education Bureau, 1935. Pp. 674 + 664. \$3.50 Mex.—60 leading papers, including both original contributions and general reviews, were selected from various Chinese journals of education and psychology published in the last five or earlier years, and reprinted in two volumes as No. 1 of a series of educational reference material selections. The papers are classified into eight parts. Part I deals with general introductions to educational psychology, covering such articles as (1) the scope of educational psychology,

by N. I. Cheng; (2) educational psychology: its development and unsolved problems, by S. Y. Ch'u; and (3) recent psychological studies in China as viewed from (the nature and amount of) publications, by Y. H. Chang (see VIII: 2391). Part II deals with brain and mental functions, covering such articles as (4) brain and thinking, and (5) the cerebral cortex and learning, by Y. T. Loo. Part III deals with the viewpoints of the different schools of psychology, covering such articles as (7) a history of psychology, by C. W. Luh and T. L. Wu; (8) an analysis and criticism of modern theories of abnormal psychology, by H. H. Hsiao; (9) behaviorism, by K. C. Chu; (10) procedure and method for studying the development of behavior, and (11) thirty years of the study of behavior (see VIII: 2400), by Z. Y. Kuo; (15) a bird's-eye view of Gestalt psychology, by H. H. Hsiao; (16) the theory of two factors, by S. L. Wang. Part IV deals with the psychology of learning, covering such articles as (18) three major problems in the psychology of learning (see IX: 1671), by H. H. Hsiao; (19) the present status of the problem of learning (see IX: 1659), by I. Chang; and (24) an analysis of the (Thorndikian) "principle of belonging" (see VIII: 2447), by H. H. Hsiao. Part V deals with the psychology of school subjects, covering such articles as (27) psychology applied to the teaching of school subjects, by W. Ai; (28) the measurement of vocabulary, by Y. H. Chang; (29) a psychological study of the Chinese characters, by W. Ai; (30) an analysis of judgments of positions of Chinese characters by American subjects (see IX: 1934), by S. K. Chou; (31) the influence of horizontal and vertical arrangements as well as of new and old systems of punctuation on the efficiency of reading, by I. Chang; (34) psychology of handwriting, (35) some important studies on teaching of arithmetic, and (37) scientific studies of horizontal and vertical arrangements (of Chinese characters), by T. C. Tu. Part VI deals with child psychology, covering such articles as (39) the nature and problems of modern child psychology (see IX: 2514), by I. Huang; (40) on the methodology of child psychology, by H. H. Hsiao; (41) child psychology from the standpoint of Gestalt theory, by K. F. Kao; (43) a study of children's fears, by H. C. Ch'en; (45) a study of eye-hand coordination, and (47) studies of motion (see VIII: 4000), by H. H. Hsiao. Part VII deals with mental hygiene, covering such articles as (48) the rise and development of the mental-hygiene movement, by N. H. Wu; (50) hygiene of emotions, by W. Ai; (51) importance and method of a social control of the feeble-minded (see VIII: 2627), and (52) the mental hygiene of problem children, by N. H. Wu. Part VIII deals with industrial psychology, covering such articles as (53) development of industrial psychology in the various nations, and (54) the principles of the marginal value and threshold of the object of industrial psychology, by H. H. Hsiao; (55) steps in constructing a vocational aptitude test, by H. H. Ch'en; (59) method of testing introversion and extraversion, by Y. T. He; and (60) a study of major interests, by C. J. Ho.—C. F. Wu (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2227. Trabue, M. R. Occupational diagnoses for educational programs. *J. educ. Res.*, 1936, 29, 327-331.—Expression of the belief that the adoption of occupational diagnostic techniques should necessitate modifications in basic educational programs if they are to be completely effective.—S. W. Fernberger (Pennsylvania).

2228. Valentine, C. W. Latin: its place and value in education. London: Univ. Press, 1935. Pp. x + 166. 6/-.—The author first considers what may be regarded as proven values in the study of Latin. Are these values, however, great enough to justify the compulsory placing of Latin in an already over-crowded school syllabus? Why is Latin generally unpopular in English secondary schools? A survey of all the common arguments in favor of Latin as a school subject shows that these are of doubtful value if they are universally applied, but that within their limits and as applied only to some students, there is much to be said in their favor. Methods of selecting students for the study of Latin are suggested, and final practical considerations relative to the teaching and place of the classics in schools in England close the book.—F. C. Bartlett (Cambridge, England).

2229. Wallack, W. M., & Briggs, H. L. Guidance in penal institutions. *Occupations*, 1936, 14, 293-305.—By relating a case treatment which was directed by the Department of Correction, New York State, these authors suggest how guidance in penal institutions can be improved so that the subjects have the greatest possible opportunity to adjust themselves. The past failures in criminal instruction have been due largely to the non-recognition of emotions in the inmates. A classification council such as described in this article would give individual attention and friendship along with intelligent guidance that would greatly facilitate successful rehabilitation.—R. H. Brown (Yankton).

2230. Wolters, A. W. Psychology in the training of teachers. *Brit. J. educ. Psychol.*, 1935, 5, 250-256.—Young teachers report that they were and continue to be interested in psychology. Most of them regard it as valuable to them in their work. They suggest greater emphasis on the psychology of development and personality, the field in which the most difficult problems arise.—K. M. Cowdery (Stanford).

2231. Xirau, J. Educación sexual. (Sexual education.) *Arch. Neurobiol.*, 1935, 15, 109-117.—An endeavor to describe sexual behavior and the broader aspects of living reality in terms of abstract principles.—R. M. Bellows (U. S. E. S. Div. Standards and Research).

[See also abstracts 1798, 1811, 1862, 2007, 2023, 2071, 2075, 2079, 2085, 2100, 2104, 2121, 2144, 2153, 2168, 2237.]

#### BIOMETRY AND STATISTICS

2232. Horst, P. Measuring complex attitudes. *J. soc. Psychol.*, 1935, 6, 369-374.—The writer discusses possible procedures for evaluations of test items in the construction of an attitude scale. He suggests a method of reciprocal averages, by which a

scale item is valued in terms of its incidence within the tested group, and further in terms of its dispersion within the group. It is reported that formulae developed in the application of this method are identical in form with the factor analysis methods of Hotelling and Thurstone.—*E. B. Newman* (Swarthmore).

2233. Peatman, J. G., & Greenspan, I. The reliability of a questionnaire on superstitious beliefs of elementary school children. *J. abnorm. soc. Psychol.*, 1935, 30, 208-221.—A questionnaire composed of 35 statements of superstitious belief and 35 statements of scientific belief was twice administered, with an interval of one month, to 431 elementary-school negro children. The retest reliability coefficient of .958 was practically unaffected by such heterogeneous factors as variations in age, sex, school grade, and place of birth. Ranking the 35 superstitious statements according to the frequency with which they were subscribed to by the group on each administration, the correlation of these ranks was .97.—*C. H. Johnson* (Boston Psychopathic Hospital).

2234. Schelling, H. v. Die Konzentration einer Verteilung und ihre Abhängigkeit von den Grenzen des Variationsbereiches. (The concentration of a segment and its dependence on the limits of variability.) *Metron*, 1934, 11, 3-18.—*R. R. Willoughby* (Clark).

2235. Tsao, Z. C., & Yang, S. Y. [Some new statistical tables.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 1, No. 1, 189-201.—The statistical computations of (1) p. e. from  $\sigma$ , up to 24.99, (2)  $\sigma_{\text{md}}$  or p. e.  $\sigma_{\text{md}}$  from  $\sigma_m$  or p. e.  $\sigma_m$ , up to 24.99, and (3)  $1 - r^2$  from  $r$ , up to .99, are worked out and presented in three tables. The computations are all carried out to 4 decimal places.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

[See also abstracts 1856, 2238.]

#### MENTAL TESTS

2236. [Anon.] Le test B.-D. collectif. (The group B.-D. test.) *Arch. belges Sci. Educ.*, 1935, 1, 36-43.—Results are given of the first application to 1149 children (both sexes, 4-7 years old) of a revision begun in 1932 by the late O. Decroly of the B.-D. (Buyse-Decroly) test, which is a group form of the Binet-Simon scale. The average scores discriminate the different ages sufficiently.—*R. Nihard* (Liège).

2237. Čečetka, J. Testovanie na školách a jeho štatistické praktikum. (Testing in schools and its statistical analysis.) Bratislava: Učitelské nakladatelstvo slovenské "Unás," 1934. Pp. 64.—A condensed textbook on testing in schools.—*T. M. Abel* (Progressive Education Association).

2238. Chang, T. S. [A study of the applications of tests and statistics.] *Kiangsu elem. Sch. Teach.*, 1934-5, 2, 51-54; 162-167; 254-257; 374-378; 476-480; 567-570; 668-672; 760-763; 866-870; 957-959.—In a series of popular writings which aim to introduce some knowledge of tests and statistics to elementary school teachers, with a view to their applications, the author discusses (1) ways of studying tests and

statistics, (2) forms of tests, (3) construction of tests, (4) statistical treatment of the major points of data, (5) statistical treatment of the variables, (6) calculation of the coefficients of correlation and their applications, (7) construction of statistical figures and tables, and (8) comparison of performance scores.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2239. François, M. Quelques travaux récents sur les tests de développement. (Certain recent work on intelligence tests.) *J. Psychol. norm. path.*, 1935, 32, 490-494.—Instead of attempting to review the entire field of testing, the author realizes that much of the work does not add any new ideas, and therefore he has chosen to examine only a few of the more representative works. He discusses the tests devised by Binet, Bühler, Simon, D'Heucqueville, Foucault, and Vermeylen. The conclusion is that, in tests of mental development, psychotechnics has not made any appreciable progress in the past twenty years. Although there have been many modifications and improved standardization, the principle has remained the same and the instrument created by Binet is still usable and sound.—*R. E. Perl* (Columbia).

2240. Gilbert, J. G. Mental efficiency in senescence. *Arch. Psychol.*, N. Y., 1935, No. 188. Pp. 60.—The problem was to compare the mental efficiency of persons in the sixties with that of persons in the twenties. Babcock's tests were given to 185 in the twenties and 175 in the sixties. Results showed a large and reliable difference between the mental efficiencies; expressed in efficiency indices the average E. I. was 0.0 for the younger group and -4.8 for the older group, with no younger person falling as low as the mean of the older group and only two older persons reaching the mean of the younger group. Separation of the sixty-year-old group into those between 60 and 64 and those between 65 and 69 shows a reliable difference in average efficiency indices, the difference being in favor of the early sixties and pointing to progressive deterioration within this decade. All evidence points to the stability of vocabulary through the years. There is marked deterioration in all types of efficiency tests, but deterioration is greatest in tests involving learning and formation of new associations, facility of perceiving relations, retention, and motor ability, and least in tests such as giving of opposites, general information, and simple repetitions.—*E. M. Achilles* (Columbia).

2241. Knight, R. M. Alexander on practical and abstract ability. *Hum. Factor, Lond.*, 1935, 9, 226-231.—*R. R. Willoughby* (Clark).

2242. Sedlaczek, S. Prognostyczność pewnych testów. (Prognostic value of several tests.) *Kwart. psychol.*, 1935, 7, 471-488.—A battery of 12 tests (including tests for verbal, numerical, stereometric, and "plain patterns" memory, and for comparisons of angles and lines) was given to students of the state middle school for architects and road constructors in Warsaw, at the beginning of the course of instruction. At the end of the course the scores on the tests were correlated with the students' success in the course. The correlations were very low, showing that these

tests were a complete failure as a selective instrument for the above schools.—*T. M. Abel* (Progressive Education Association).

2243. **Shen, C. O.** [A brief history of the development of age scales.] Shanghai: Commercial Press, 1934. Pp. 98. \$25 Mex.—The author first discusses the historical background of the development of age scales, the practical demands (or social factor) for studying deaf and dumb, feeble-minded children, insane persons, and criminals, and the theoretical interest as a result of the development of experimental psychology, study of individual differences, genetics, and measurements of human physique. He then reviews the life and work of Binet, the development of age scales, Binet's principles of selecting and treating tests, and the characteristics of the Binet scale. The various revisions of the Binet scale in Italy, Germany, England, the United States of America, and Japan, are reviewed in detail.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2244. **Velasco, C., & Téllez, J.** La "Stanford revision" de Terman. (*The Stanford Revision of Terman.*) *Arch. Neurobiol.*, 1935, 15, 61-70.—A comparison of the total and abbreviated scales on Spanish subjects. Coefficients of intelligence were obtained on 500 subjects ranging in age from 10 years to adult (median age 13 years, 114 cases) by both the Spanish version of the entire Terman revision and a considerably shortened form. In 33 cases, or 6.6%, there was no difference in mental age. MA by the short method was lower than by the long in 61%, and greater in 32% of the cases. The difference in mental ages obtained by the two methods was less than one year in 454 cases (90.8%) and greater than one year in 46 cases (9.2%). It is concluded that the abbreviated method is almost as exact, the Spearman coefficient of correlation being .95, and that there was an appreciable difference in only 4.4% of the cases.—*R. M. Bellows* (U. S. E. S. Div. Standards and Research).

[See also abstracts 2185, 2247, 2248.]

#### CHILDHOOD AND ADOLESCENCE

2245. **Blatz, W. E., & Millichamp, D. A.** The development of emotion in the infant. *Univ. Toronto Stud. Child Devpm. Ser.*, No. 4, 1935. Pp. 44.—This study is an analysis of the emotional episodes of 5 children observed continuously for 3 consecutive days at monthly intervals from the age of one month to 2 years. The observations were made in the home situation and were objective in character. The analysis showed: (1) that emotional frequency decreased with age; (2) that behavior increased in complexity; (3) that emotional situations may possibly be divided into (a) thwarting of non-specific approach attitudes, (b) thwarting of specific approach attitudes, and (c) thwarting of specific withdrawal attitudes; and (4) that emotional life starts when the experienced situation cannot be adequately dealt with by means of the response repertoire available at the time; differentiation occurs through the innate mechanism of approach and withdrawal. There

appear, early, only two gross forms of emotional behavior, anger and fear, positive and negative. The complicated emotional experience of later life results from the growing complexity of total situations depending, not on change in fundamental character of emotion, but rather on whether the conflict pertains to sex, hunger, rest, self-assertion, etc.—*J. Mc V. Hunt* (Nebraska).

2246. **Blatz, W. E., & Ringland, M. C.** The study of tics in pre-school children. *Univ. Toronto Stud., Child Devpm. Ser.*, No. 3. 1935. Pp. 58.—A quantitative study of tics in pre-school children by the time-sampling method was made to discover their nature, frequency and origin. Individual observations were taken over half-hour periods and the tics classified in 13 categories. The results indicate that tics are an extremely common form of reaction in pre-school and first-grade school children (tics being defined as "any circumscribed muscular activity, exclusive of gross random movements, that is not necessary to or relevant for the immediate adjustment to the apparent motivating situation"); that the mouth is the most frequently involved part of the organism; that between the ages of two and seven the frequency of tics increases with age; that sex is not a factor; that inhibition of gross bodily movements increases frequency of tics; and that certain phases of school life tend to foster the development of superfluous and undesirable movements which in extreme forms are regarded as serious abnormalities. A historical review and a bibliography of 57 titles is included.—*W. E. Walton* (Nebraska).

2247. **Buehler, C., & Hetzer, H.** Testing children's development from birth to school age. (Trans. by H. Beaumont.) New York: Farrar & Rinehart, 1935. Pp. 191. \$3.50.—*J. Mc V. Hunt* (Nebraska).

2248. **Cser, Y.** Szövegkiegészítés a 10-14 éves korban. (*Completion tests of children of 10-14 years.*) *Gyermekek*, 1935, 27, 33-39.—There is only a slight difference between the two sexes; boys are better except in the 11th year; their growth rate gradually rises, while that of girls falls. Class groups show a greater fluctuation than age groups. With boys the 14th, with girls the 13th year shows difficulties.—*P. Ranschburg* (Budapest).

2249. **Fei, C. H.** [Six months' observation of the psychophysical development of a new-born child.] *N. C. J. Psychol. nat. cent. Univ.*, 1934, 1, No. 2. Pp. 42.—With the purposes of giving to prospective mothers some information concerning the general conditions of child development and of supplying to child psychologists some material for reference, the author observed and recorded day by day the psychophysical development of his own new-born child for a period of 6 months. The times of first appearance of a number of behavior items as observed by other investigators (notably Tiedemann, Lobisch, Sigismund, Kussmaul, Darwin, Preyer, Shinn, Mrs. Hall, Mrs. Moore, Chen, and Ké) are compared with his own observations in 15 tables. The author also summarizes the outstanding features of each month, so that we may get some picture of the psychophysical

development of an infant at the ages of 1, 2, 3, 4, 5, and 6 months.—*C. F. Wu* (Nat. Res. Inst. Psychol., Acad. Sinica, China).

2250. **Frankl, S.** *Az idegbajos gyermek.* (The neuropathic child.) Budapest: 1936. Pp. 61.—Part I. (1) Nervous system. (2) Mental evolution of the new-born child. (3) Play. (4) Lies. (5) Non-eating behavior. (6) Obstination. (7) Masturbation. (8) Sexual enlightenment. (9) Puberty. (10) Suicide. (11) Psychopathy. (12) Nervousness. (13) The neglected child. (14) Mental deficiencies. Part II. (1) Sleep disturbances. (2) Enuresis. (3) Tic. (4) Stuttering. (5) Sydenham's chorea. (6) Epilepsy. (7) Hydrocephaly. (8, 9) Meningitis. (10) Palsy. (11) Congenital syphilis. (12) Tabes and general paralysis in childhood. (13) Hebephrenia.—*P. Ranschburg* (Budapest).

2251. **Hayward, R. S.** *The child's report of psychological factors in the family.* *Arch. Psychol.*, N. Y., 1935, No. 189. Pp. 75.—The family inventory—questions to the child about each parent—was given. The retest reliability was  $.82 \pm .03$ . The delinquent child reports a greater number of factors of maladjustment in his family than does the non-delinquent child, and these factors are different. The number of children in the family has no effect on the number of factors of disorganization reported by the child. The child reports more factors of family incompatibility for the mother than for the father. An item analysis of 50 of the questions showed that the child does not react to one personality in the family, either father or mother, but to the family as a total organization. A bibliography of 257 items is appended.—*E. M. Achilles* (Columbia).

2252. **Hilferding-Hönigsberg, M.** *Individualpsychologische Gedankengänge eines Kinderarztes.* (Individual-psychological ideas of a pediatrician.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 206-213.—Critical review of an article (*Wiener Klin. Wschr.*, January 1935). The reviewer is in agreement generally with the observations recorded on psychological aspects of children's illnesses. She criticizes the writer for not using the Adlerian terminology and for failure to credit the Adlerian movement for conceptions which are in agreement with it.—*O. N. de Weerdt* (Beloit).

2253. **Ilyefalvy, I. L.** *A gyermek Budapesten.* (The child in Budapest.) Budapest: Statistical Board, 1935. Pp. 202.—Statistics of 156,000 children of Budapest. (1) Preface. (2) Standard measures. (3) Fluctuations of the number of children from 1870 to 1930, by age, districts, language, religion, and sensory and intellectual deficiencies. (3) Distribution

of lodgings according to the number of children, extension of lodging districts, social shifts, owners and tenants, occupations of parents. (4) Birth statistics according to legitimacy, religion, age and occupation of parents, ordinal number of the birth, etc., with divorces during 1900-1933. (5) Mortality of children; hygienic condition of children, distribution of institutions. (6) Moral condition, 1930-33. Police court for children; criminal actions against children; criminality of children; court for children and adolescents. (7) General instruction and education; number of children in the different educational institutions for normal and deficient children from 1900 to 1933. (8) School charity. (9) Control of children of school age, and cultural institutions. (10) Child protection activities of the community. (11) Child protection institutions supported by state, social, and private means. (12) Protection of orphans. (13) Child labor; apprentices; child and adolescent laborers in factories (1927-1932), their salaries and working days in the different industries.—*P. Ranschburg* (Budapest).

2254. **Knoll, E.** *Sozialpsychologie der Reifezeit.* (Social psychology of adolescence.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 228-229.—*H. Beaumont* (Kentucky).

2255. **Kuhn, H. J.** *Die sozialpsychische Entwicklung in der frühen Kindheit.* (Socio-psychic development in early childhood.) *Ber. Kongr. dtsch. Ges. Psychol.*, Tübingen, 1935, 14, 219-221.—*H. Beaumont* (Kentucky).

2256. **Lange, L.** [Studies of the physical development of youth.] *Przegl. Fizjol. Ruchu.*, 1934, 6, 358-385.—Nordic and Alpine races manifest only average stature during adolescence but at the age of 21 increase to a maximum. Aptitudes for sport likewise depend upon race.—*H. E. Burtt* (Ohio State).

2257. **Lázár, K.** *A gyermektanulmány vázlat.* (Outlines of child study.) In [*Handbook of Practical Pedagogy*]. Sárospatak: 1933.—Introduction. Somatic examination of the child. Child psychology. Characteristics of the stages of evolution. Outlines of typology. Outlines of individual psychology. Outlines of psychology of faculties and talents. Plan of work for pedagogical-psychological exercises for students in training colleges for teachers. Hungarian literature of the child and the adolescent.—*P. Ranschburg* (Budapest).

[See also abstracts 1850, 1861, 1993, 2023, 2043, 2049, 2071, 2079, 2085, 2125, 2188, 2209, 2211, 2212, 2215, 2224, 2233.]

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